the American Midwife Debate

A Sourcebook on Its Modern Origins

Judy Barrett Litoff

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This fascinating sourcebook on the early twentieth-century midwife debate brings together a wealth of rare and hard-to-locate primary source materials on a subject of both historical and contemporary interest. It presents a wide range of views on the topic, enabling the reader to judge the issue on its merits.

In the introductory chapter, Professor Litoff provides a historical overview of the role and status of midwives in twentieth-century America. This is followed by a selection of articles and documents written between 1900 and 1930 which illustrates the complexities and contradictions of the early twentieth-century midwife debate. These articles present the views of opponents and proponents of midwifery, those who considered the midwife to be a necessary evil, and those who looked to the nurse-midwife as a workable solution to the "midwife problem." A special feature is the inclusion of several rarely seen photographs of immigrant and black "granny" midwives.

The author's introduction and the articles themselves shed considerable light on the similarities

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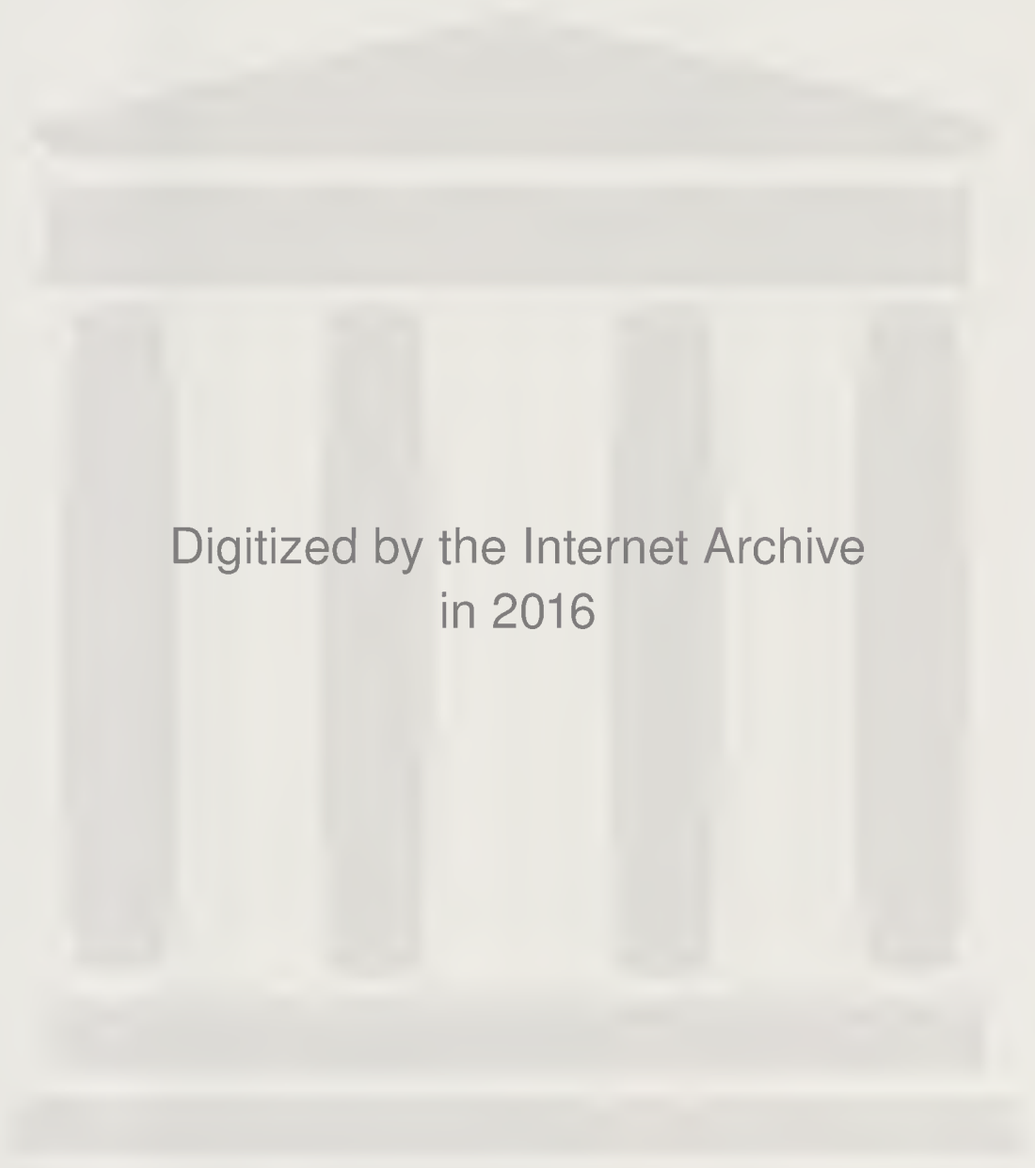

The American Midwife Debate

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THE AMERICAN MIDWIFE DEBATE

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JUDY BARRETT LITOFF

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For my parents

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Preface

At the beginning of the 1970s, the number of midwife-attended births reached an all-time low of 0.5 percent. Around 1974, however, there was a small but significant shift away from physician-managed hospital births. By 1982 the number of midwife-attended births had quadrupled to 2.1 percent. The recent comeback of the midwife has generated a variety of questions about her present and future role. Despite the new visibility accorded midwifery, large numbers of Americans remain unaware of the fact that as late as 1910 approximately one-half of all births in the United States were attended by midwives. Nor do they realize that the origins of many of the midwifery issues which are presently under discussion can be traced to an earlier and more vociferous "midwife debate" which occurred between 1910 and 1930.

This book examines the basic contours of the early twentieth-century midwife debate. It brings together rare and difficult to locate primary source materials which highlight the complexities, contradictions, and subtleties of the debate while also allowing the reader to judge for her/himself the intrinsic worth of early twentieth-century midwifery.

Chapter I provides a historical overview of midwifery in twentieth-century America. Particular attention is placed on the similarities and differences between the present midwife debate and its counterpart earlier in the century. Chapter II contains source materials which shed light on those events which contributed to the "rediscovery" of the early twentieth-century midwife. Chapters III through V include selections which underscore the arguments put forth by both the opponents and proponents of midwifery. Chapter VI presents documents which support the replacement of midwives with specially trained nurse-midwives.

arrived in America, they continued to employ midwives. By the early decades of the twentieth century, many cities and towns of the urban northeast and midwest, where the immigrants most often settled, had begun to experience an unexpected revival of midwifery.[4]

Recently arrived immigrants were not the only group of Americans to rely on the services of the midwife. Other poor people, most notably black Americans, also sought her assistance. In the southern states, perhaps as many as 90 percent of all black births were attended by midwives during the early decades of the twentieth century. Throughout the rural areas of the United States, friends and relatives were often called upon to act as midwives. In fact, there was no clear demarcation line between the women who acted in the official capacity of a midwife once or twice a year and the neighbor who occasionally came to the aid of a friend in need.[5]

Regardless of her ethnic background, the turn-of-the-twentieth-century midwife was most likely an empirically trained woman. Her lack of formal education and her unfamiliarity with modern obstetric techniques meant that she usually subscribed to a noninterventionist approach to childbirth of letting nature take its course. The midwife's chief duty was to comfort the parturient woman during the often long and arduous hours of labor. Basically, it was her responsibility to catch the baby, tie the umbilical cord, and, if necessary, fetch the placenta. The midwife probably encouraged the laboring woman to walk around. She may have offered herbal teas, wine, or perhaps hard liquor to help ease the birthing pains. In order to determine the progress of labor, she might have examined the cervix. During complicated cases, she might even have found it necessary to turn the fetus—podalic version—or administer ergot.[6]

Poor Americans preferred midwives for a variety of reasons. Immigrants sought out midwives because they spoke the same language and shared similar traditions and customs. Immigrant contempt of men in the birthing room also contributed to the popularity of midwives. The economics of midwifery was a further determining factor. Generally speaking, the midwife's fee was less than one-half of that of the physician. Of perhaps even greater significance was the practice of allowing for the informal arrangement of payment in the form of chickens, pigs, grain, or on a neighborly give-and-take basis.[7]

Not only did midwives charge substantially less than physicians, but they also provided a variety of services not offered by the medical doctor. The midwife served as the birth attendant, nurse, and housekeeper. In addition to caring for the mother and newborn infant, she also cleaned the house, prepared the meals, and looked after the other children in the family for approximately two weeks after the birth of the baby.[8]

In total, approximately 50 percent of all births in the United States

were attended by midwives at the turn of the twentieth century.[9] But these statistics alone do not account for the renewed interest in the midwife. In their search for a safer birthing experience, increasing numbers of upper- and middle-class childbearing women had turned to physicians during the nineteenth century. Nevertheless, the maternal and infant mortality rates of the United States had remained alarmingly high. The federal Children's Bureau reported in 1917 that "childbirth caused more deaths among women fifteen to forty-four years old than any disease except tuberculosis." Generating perhaps even greater alarm were statistics which showed that the American maternal mortality rate was well above that of most European countries. Only two of fifteen countries investigated by the Children's Bureau had maternal mortality rates higher than the United States for the 1900–1910 period.[10] Just as disturbing were the infant mortality figures. The Children's Bureau reported a national average of 124 infant deaths per 1,000 live births in 1910. When compared with the infant mortality rates of the major European countries, the United States again fared badly.[11]

Physician-directed obstetrics had not resulted in a safer maternity. Instead, the emergence of "scientific" obstetrics had given rise to a fresh set of problems.[12] The forceps perhaps best symbolized the dilemma facing physicians schooled in the "new" obstetrics. When properly used, the forceps could save lives, but when misused they could cause severe perineal lacerations to the woman and head injuries to the fetus. Indeed, almost any type of intervention by the physician brought with it the possibility of harm because of the dangers associated with infection. Since doctors also attended patients with communicable diseases, they were more likely to introduce agents of infection to the laboring woman than were midwives. Outbreaks of life-threatening puerperal fever were all too common among the practices of physicians.

The use of anesthesia in childbirth in the decades after 1850 was another medical innovation that did not always benefit the parturient woman. While anesthesia brought about improved comfort for the laboring woman, the careless administration of ether or chloroform could result in the deceleration of labor and breathing disorders.

The physician's lack of clinical experience also hampered him in his work. Beginning around the middle of the nineteenth century, some medical students were allowed to observe women in labor, but many medical schools continued to teach from textbooks and to use mannequins. As late as 1910, many medical school graduates began the practice of medicine having witnessed few or no births.[13]

Clearly, the record of the physicians was less than might be desired. Several early twentieth-century studies revealed that maternal mortality rates were lowest in those localities reporting the highest percentage of midwife-attended births.[14] Some physicians openly admitted that a prob-

lem existed. A 1911 survey disclosed that medical professors at the nation's leading medical schools concurred in the opinion that "general practitioners lose as many and possibly more women from puerperal infection than do midwives."[15]

Two decades later, physicians were still being held accountable for the nation's persistently high maternal mortality rate. Reports issued in the early 1930s by the White House Conference on Child Health and Protection, the national Committee on the Costs of Medical Care, and the New York Academy of Medicine all concluded that the record of physicians was not equal to that of midwives.[16] The Committee on the Costs of Medical Care argued that the midwife took better care of pregnant women because "she waits patiently and lets nature take its course," while physicians employ "procedures which are calculated to hasten delivery, but which sometimes result harmfully to mother and child."[17]

All three reports were critical of physicians for the frequency with which they interfered with the natural course of labor. The increase in operative deliveries, especially the use of forceps and cesarean sections, were specifically singled out for criticism. The White House Conference on Child Health and Protection concluded that "it seems possible that all the advances in medical knowledge have been lost to the parturient woman through too great a recourse to instrumental delivery."[18]

Despite the findings of such prestigious organizations as the White House Conference on Child Health and Protection, the Committee on the Costs of Medical Care, and the New York Academy of Medicine, it was the *midwife* who was most often blamed for the high maternal and infant death rates of the early twentieth century. Physicians, many of whom were obstetric specialists, were primarily responsible for placing this onus on the midwife. They spared no words in condemning her "ignorant" and "dirty" ways. They argued that only by eliminating the midwife, or, at least, substantially reducing her numbers would the health of pregnant women and infants be adequately protected.[19] All too easily the midwife became the scapegoat for the high mortality rates associated with childbirth.

Anti-midwife physicians published a spate of articles on the American "midwife problem" in medical journals and popular periodicals during the early decades of the twentieth century. Indeed, between 1910 and 1930, the medical community and, to a lesser extent, the general public became embroiled in a vehement debate over the present and future role of the midwife in American society.[20]

Because obstetrics was then considered to be the least appreciated branch of medicine, midwife critics endeavored to show that there was a direct relationship between the low status accorded obstetricians and the large numbers of births attended by midwives. They argued that as long as women untrained in the medical sciences continued to attend

one-half of all births, the obstetrician would never receive his due recognition. They repeatedly emphasized that obstetrics belonged "to the scientifically trained physician and to none else." If obstetric work were poorly performed, it should be corrected, but under no circumstances should the midwife be granted a permanent place within the American medical hierarchy.[21]

Dr. J. Whitridge Williams, the most prominent figure in American obstetrics during the early years of the twentieth century, spearheaded the movement to upgrade obstetrics and eliminate the midwife. In a seminal article originally published in 1911, "The Midwife Problem and Medical Education in the United States," Williams pointed to the dangers associated with childbirth and the concomitant need to recognize that obstetrics comprised a complicated medical specialty. He saw the elimination of the midwife and the elevation of the status of the obstetrician as two sides of the same coin. Ultimately, Williams was hopeful that the American public would recognize "that a well-conducted hospital is the ideal place for delivery."[22]

The arguments of Williams were advanced and refined by a number of other anti-midwife physicians. Because the practices of midwives were concentrated among the poor, midwife opponents commonly complained that midwives held a monopoly over that group of women most likely to serve as clinical material for medical students. The low fees which midwives charged were said to be responsible for the inadequate compensation which physicians received for their work. Opponents also argued that the "overcrowding" of the medical profession was aggravated by the work of the midwives.[23]

Not all midwife opponents felt that it was practical to call for the *immediate* abolishment of the midwife. Convinced that she would be a "necessary evil" for many years to come, these critics called for the establishment of temporary training and regulatory programs as stopgap measures aimed at easing the transition from midwife-attended to physician-attended births. Once an adequate number of physicians were properly trained and a sufficient number of maternity hospitals and dispensaries were established, the midwife could then be regulated out of existence.[24]

Midwives found it extremely difficult to counter the charges of their critics. Beset by the problems of poverty, language barriers, and geographical separation, they remained isolated from each other. They had no national professional organization to lobby for their cause. Largely left to their own resources, midwives simply went about their work as unobtrusively as possible. At a time when medicine was becoming a powerful professional force, midwives were compelled to go their separate ways.[25]

The American midwife did not face this onslaught of criticism entirely

alone. Most importantly, public health advocates frequently spoke out in her defense. Through statistical analysis, they showed how properly trained and regulated midwives could help bring about dramatic declines in the nation's infant and maternal mortality rates. Carolyn Conant Van Blarcom, a nurse and leading midwife reformer, published a book-length study in 1913, *The Midwife in England*, in which she showed how the training and regulation of English midwives had helped to bring about a substantial reduction in that country's infant mortality rate. Van Blarcom also chastised the United States for being "the only civilized country in the world" that did not protect its mothers and infants by providing for the training and licensing of midwives.[26]

Dr. S. Josephine Baker, who served with the New York City Department of Health for more than a quarter of a century, and Dr. Julius Levy, the chief of New Jersey's Bureau of Child Hygiene for more than three decades, were two other leading midwife proponents. Baker was a staunch supporter of the trained and regulated midwife. To this end, she played an instrumental role in the establishment of New York City's Bellevue School for Midwives in 1911, the first and only municipally sponsored school for midwives. Under the direction of Baker, the infant mortality rate of New York City was cut in half. A report issued by New York City's health department in 1921 concluded that the regulation and supervision of midwives had had "an important bearing" on this decline.[27]

The work of Dr. Julius Levy in New Jersey was equally impressive. Under Levy's guidance, New Jersey instituted a comprehensive training and regulatory program for its midwives. Almost immediately, the state's maternal and infant death rates began to drop. A 1923 article by Levy indicated that maternal mortality rates were lowest in those New Jersey counties that had the highest percentage of midwife-attended births. New Jersey also endeavored to promote the welfare of its midwives by publishing a unique magazine, *The Progressive Midwife*.[28]

None of this is to suggest that the work of the midwives was above reproach. The fact that midwifery training and supervisory programs resulted in sharp declines in maternal and infant death rates suggests that the practices of large numbers of midwives were sorely lacking. Not all midwives were willing to call upon the assistance of physicians when complications arose. Some midwives were careless when it came to washing their hands and following modern methods of asepsis while others performed illegal and dangerous abortions.[29] Yet the midwife was not the scapegoat that her critics made her out to be. The nation's high maternal and infant death rates were due to a number of complex factors including poverty, inadequate prenatal care, and the capability of the birth attendant. Blaming such a complex and wide-ranging problem on the midwife was a way of sidestepping a very complicated and controversial issue.

As the early twentieth-century midwife debate was raging, the ranks of the midwives were sharply and steadily decreasing. By 1930, only 15 percent of all births in the United States were attended by midwives.[30] There is no simple explanation for the striking decline in the number of midwife-attended births during these years. Certainly, the arguments presented by the anti-midwife physicians played a major role in bringing about her near demise. Because they were both well organized and highly articulate, physicians found it relatively easy to convince a receptive public that childbirth was a complicated medical condition requiring the skills of the specially trained medical doctor.[31]

Midwives were in no position to respond effectively to the charges of the anti-midwife physicians. Isolated from each other because of poverty and communication problems, they lacked the wherewithal to stand up to their critics. While some public health officials spoke out in the midwife's behalf, this support paled in comparison to the onslaught of criticism initiated by the obstetric specialists. The sex of the midwives also worked against them. Although the American feminist movement supported the entry of women into the medical profession, it did not look upon midwifery as a cause to be championed.[32]

Lacking a strong mandate from the public, state and federal governments were reluctant to invest large sums of money in training and supervisory programs. Even model programs, such as those established in New York and New Jersey, suffered from a lack of funds. Moreover, public health officials in both New York and New Jersey noted that their strict supervisory programs had created a situation whereby many midwives had been inadvertently pushed out of the profession.[33]

The passage of the 1921 Sheppard-Towner Maternity and Infancy Protection Act provided some federal funds to the states on a matching basis for the improvement of maternal and infant care. Unfortunately, the amount of money appropriated for midwife training under this act was quite small. Even so, several state health officials expressed concern that the expiration of the act in 1929 would result in significant curtailments in their midwifery programs.[34] The dearth of adequate training and supervisory programs helped to ensure the downfall of the midwife.

The medley of regulatory legislation that was adopted during the early years of the twentieth century also complicated and obfuscated the position of the midwife. Contrary to the popularly held opinion that state after state outlawed the midwife, only in one instance did a state actually declare midwifery to be illegal. Through a combination of legislative action and judicial dicta, Massachusetts outlawed midwifery in 1907. Ironically enough, the number of midwife-attended births increased in Massachusetts in the succeeding decade.[35]

Basically, however, the laws pertaining to midwives were quite lenient. Because the midwife was supposed to limit her practice to normal

births, she was usually prohibited from administering drugs or using instruments. Midwifery legislation often stipulated that she register all births and apply silver nitrate to the newborn infant's eyes as an ophthalmia prophylaxis. Yet no two states provided for their midwives in exactly the same way. As late as 1930, ten states neither licensed nor regulated their midwives. Six other states required that their midwives be registered, but not licensed. Several states provided no penalties for violating the law, and in many areas the laws were unenforceable.[36] This myriad of legislation was still another obstacle which threatened to bring about her undoing.

A variety of social and cultural changes only peripherally related to the early twentieth-century midwife debate also helped to undermine the midwife's position. The rapid growth of American hospitals in the years after 1910 allowed for the creation of additional maternity wards.[37] Moreover, the popularity and affordability of the automobile meant that parturient women could now be safely and quickly driven to hospitals.

The halting of immigration from southern and eastern Europe during the early 1920s resulted in fewer women demanding the services of the midwife. The Americanization process also took its toll. As the assimilation of the immigrants took place, the European-style midwife began to disappear. Immigrant women looked upon physician-managed births as a mark of distinction and as a sign that they were truly "American."[38]

The striking and sustained decline in the birth rate in the years after 1920 also had an adverse effect on the midwife's role and status. As increasing numbers of American families chose to have fewer children, attitudes about childbirth also began to change. No longer was birth perceived as a routine matter. Rather, the birth of a baby was now deemed a very special event which needed to be planned for carefully. Young couples often sought out the best medical help they could attain. This frequently meant entering one of the growing numbers of hospitals where parturient women were attended by specially trained physicians.[39]

Given this vast array of events and forces coming together as they did at approximately the same time, it is little wonder that the midwife nearly met her demise. But she was not entirely defeated. In the midst of the early twentieth-century midwife debate, a few public health officials and physicians began to endorse the concept of the trained and regulated nurse-midwife as a possible solution to the "midwife problem." Unlike the old-style midwife who was usually empirically trained, the nurse-midwife was a graduate nurse who also had received special instruction in midwifery.

While the idea of nurse-midwifery was discussed among public health officials as early as 1911, it was not until the mid–1920s that a nurse-midwifery service was actually established in the United States.[40] Located in the poverty-stricken mountains of eastern Kentucky, this first

nurse-midwifery program was the product of the tireless and undaunted efforts of Mary Breckinridge. After conducting an investigation of the health needs of women and children of eastern Kentucky in 1923, Breckinridge concluded that the care provided mountain mothers was woefully lacking.[41] In an effort to rectify this situation, Breckinridge inaugurated a program aimed at replacing the empirically trained midwives of eastern Kentucky with professionally instructed nurse-midwives. To this end, she founded the Kentucky Committee for Mothers and Babies in 1925, renamed the Frontier Nursing Service (FNS) three years later.

The Frontier Nursing Service proved to be a very successful organization. Between 1925 and 1937, its maternal mortality rate stood at 0.68 per one thousand live births, while the national average during these years ranged from 5.6 to 6.8 deaths per one thousand live births. In succeeding decades, the maternal mortality rate of the FNS was even further reduced.[42]

The noteworthy accomplishments of the Frontier Nursing Service were duplicated by New York City's Maternity Center Association (MCA). Originally founded in 1918 for the purpose of providing proper prenatal care for pregnant women, the MCA expanded its activities in the early 1930s to include a nurse-midwifery clinic and school. Although located in Harlem, an area dubiously recognized for its impoverishment and high maternal death rate, only one of the first 1,081 pregnant women who enrolled in the clinic died. By way of comparison, the district as a whole experienced a maternal mortality rate of 10.4 per one thousand live births. The work of the Maternity Center Association was felt well beyond New York City. Graduates of the MCA's nurse-midwifery school traveled across the nation assisting in the training of old-style midwives as well as working to establish schools of nurse-midwifery in such diverse locations as Tuskegee, Alabama, and Sante Fe, New Mexico. Truly, the work of the Maternity Center Association was commendable.[43]

Despite the near-flawless record of both the Frontier Nursing Service and the Maternity Center Association, nurse-midwifery failed to make significant headway over the next several decades. Only among poor and geographically isolated women did nurse-midwifery begin to take root. This limited growth can be partially attributed to the somewhat ambiguous relationship that developed between nurse-midwives and professional nurses. Originally, nurse-midwives identified with public health nurses and had their own special section within the National Organization for Public Health Nursing. When that organization was discontinued in the early 1950s, the two remaining national nursing organizations, the American Nurses' Association and the National League for Nursing, declined to establish special nurse-midwifery sections.[44] Lacking a mouthpiece of their own, nurse-midwives in attend-

ance at the 1954 annual convention of the American Nurses' Association met together and laid the groundwork for the formation of the American College of Nurse-Midwifery (ACNM) in 1955. Renamed the American College of Nurse-Midwives in 1969, this organization has been successful in enhancing the status of the nurse-midwife by setting forth uniform education and certification standards and working for her legal recognition.[45]

Physician opposition to nurse-midwifery and the medicalization of childbirth have been much more important in explaining the narrow appeal of nurse-midwifery than the disputes within the nursing profession. The early twentieth-century movement to eradicate the midwife helped to create a climate hostile to the concept of nurse-midwifery. Many physicians appeared unwilling to make a distinction between the professionally instructed and certified nurse-midwife of the present and the old-style, empirically trained midwife of the past. A study conducted by the American College of Obstetricians and Gynecologists (ACOG) in the early 1960s showed that there was considerable opposition to nurse-midwifery among its members.[46] Not until 1971 did ACOG see fit to issue a policy statement expressing qualified support for the use of nurse-midwives as part of "medically directed teams."[47]

The dominant medical belief that childbirth was a dangerous and potentially pathological event fittingly dovetailed with the view that the hospital was the best place to give birth. While a number of early twentieth-century midwife critics had argued that the hospital offered the laboring woman the safest birthing experience, it was not until the 1930s that large numbers of American women began having their babies in hospitals. In 1935, the year for which national statistics are first available, 36.9 percent of all births occurred in hospitals. Over the next several decades, this figure rapidly rose. On the eve of World War II, more than one-half of all babies were born in hospitals. Ten years later, in the early 1950s, fully 90 percent of American women went to the hospital to give birth. Accompanying this move to the hospital was the continued decline in the number of midwife-attended births. By the early 1970s, over 99 percent of all births took place in hospitals and were attended by physicians.[48]

Women preferred the hospital over the home because they believed that it offered them a safer and less painful birthing experience.[49] Hospital-managed births allowed for the systematic use of pain-relieving drugs, labor inducers, and other types of medical interventions not routinely available in the home. Yet there is no clear-cut evidence which demonstrates that hospital-managed births afforded healthy mothers with normal pregnancies a safer maternity, and there is some evidence to suggest that women who went to hospitals faced greater perils than their neighbors who chose to give birth at home. While it is true that

the maternal mortality rate of the United States fell precipitously in the years after 1935, this decrease was not due to the movement to the hospital per se. The development and widespread adoption of antibiotics, sulfonamides, and blood and blood substitutes capable of combatting infection and hemorrhaging, two of the leading causes of maternal deaths, were probably most responsible for this decline.[50]

In choosing the hospital over home, American women relinquished control over an event which they had monopolized for centuries. As long as women gave birth at home, regardless of whether they were attended by midwives or physicians, they were able to maintain a fair degree of control over what happened in the birthing room. With the move to the hospital, however, they lost this autonomy.[51]

Despite the near unanimity with which pregnant women selected to give birth in hospitals, there were some rumblings of discontent. A small minority of American women found the impersonal, scientific approach to childbirth adopted by most hospitals to be lacking in the human dimension. The emergence of the natural childbirth movement in the late 1940s and early 1950s demonstrated that at least some women were concerned about the emotional side of childbirth. Popular works, such as Grantly Dick-Read's *Childbirth Without Fear: The Principles and Practices of Natural Childbirth*, first published in the United States in 1944, and Elisabeth Bing's *Thank You, Dr. Lamaze: A Mother's Experiences in Painless Childbirth*, which appeared in 1959, reinforced the view that the pregnant woman had the right to a personally satisfying and safe birthing experience.[52]

During the 1950s and 1960s, the natural childbirth movement gathered momentum. However, it lacked an overtly feminist critique of the American way of giving birth. Natural childbirth proponents focused on the personal satisfactions and pleasures associated with birth. Not until the appearance of the "second wave" of feminism would childbirth be defined as a distinctly feminist concern.[53]

The new feminism which made its debut during the late 1960s and early 1970s marked the emergence of a movement concerned with a wide array of women's issues as diverse as equal pay for equal work, the expansion of child care facilities, lesbian rights, and the overhauling of traditional marriage and family patterns. Yet central to this new feminism was the commonly shared belief that the ultimate goal was for women to attain personal fulfillment and autonomy within their lives. Drawing from the philosophy of the New Left movement of the 1960s, American feminists often reiterated the principle that "the personal is the political."[54]

One aspect of the new feminism which demonstrated considerable strength and influence throughout the United States was the woman's health movement. Feminist health advocates firmly and forthrightly de-

manded the right of women to control their bodies. The vitality of this movement was underscored as feminist health collectives across the nation founded gynecological clinics, agitated for abortion rights, and published new information about women's health issues and sexuality.[55]

Out of this movement emerged an exhaustive critique of the American way of birth. Women's health advocates noted with dismay that giving birth in the hospital was often a dehumanizing and impersonal event instead of a joyous experience to be shared with family and friends. They were disconcerted by the fact that hospital-managed births routinely included procedures such as the shaving of pubic hair, fetal monitoring, chemical stimulation of labor, episiotomies, and the separation of the mother from the newborn infant. They also expressed alarm about the growing rate of cesarean births. Perceiving birth to be "a vital feminist issue," they argued that women themselves should exert ultimate control over childbirth.[56]

Spurred on in part by the new feminist movement, proponents of natural childbirth began to place greater emphasis on the need for women to regain control of birth.[57] In recent years, moreover, it has become increasingly difficult to distinguish between the critiques of birthing in America advanced by natural childbirth proponents and those set forth by feminist health advocates.[58]

Because of the unlikelihood of women taking charge of their births within the traditional hospital setting, opponents of hospital-managed births began to seek alternative methods of childbirth. During the 1970s, a variety of alternative birthing organizations were founded including the American Association for Childbirth at Home International, the American College of Home Obstetrics, Home Oriented Maternity Experience, and the National Association of Parents and Professionals for Safe Alternatives in Childbirth. Arguing that birth in the hospital was fraught with the potential for iatrogenic disease and death, these groups promoted several different alternatives to hospital childbirth including the introduction of home-like birthing rooms in hospitals, the establishment of free-standing birthing centers, and, perhaps most importantly, the restoration of birth to the home.[59]

The growth of the alternative birth movement has been accompanied by a renewed interest in midwifery. Most women who seek out alternative births call on midwives to assist them. Beginning around 1974, in fact, there was a small, but significant, shift away from physician-managed hospital births. While only 0.5 percent of all births were attended by midwives in the early 1970s, this figure had risen to 2.1 percent by 1982.[60]

There are actually three distinct types of midwives in the United States today. Old-style lay midwives still practice throughout much of the south and southwest. Because most of these midwives are elderly women and

many states no longer issue lay midwifery permits, it is not likely that this type of midwifery will survive for many more years.[61] By contrast, a second group, certified nurse-midwives, are slowly gaining recognition and acceptance from the medical profession and the public.[62] The third group represents a new brand of younger, empirically trained women variously referred to as "lay," "uncertified," or "independent" midwives.[63]

The recent renaissance of midwifery has generated a new "midwife debate." Although not nearly as vociferous as the early twentieth-century controversy, the present midwife debate shares much in common with events that occurred during the early decades of the century.

Most importantly, physician opposition and dominant medical views about childbirth have hindered both nurse-midwives and "independent" midwives in their work. While physician antipathy to nurse-midwifery is not nearly as strong as it once was, there is still considerable resistance within the medical community. Many hospitals refuse to grant full maternity privileges to nurse-midwives. Although maternal and infant mortality rates have almost always been sharply reduced in those areas where nurse-midwives have been fully utilized, physicians have been reluctant to accept them as part of medically directed obstetric teams.[64]

The arguments of modern-day critics of nurse-midwifery sometime sound remarkably similar to those of their early twentieth-century counterparts. The sentiments of the early twentieth-century midwife opponents were cogently reflected in Dr. Russell J. Paalman's 1975 presidential address to the Central Association of Obstetricians and Gynecologists. In language characteristic of the earlier period, Paalman stated: "Can a nurse-midwife pick up all the early signs of impending disaster and consult an obstetrician in time? Is not every pregnant woman entitled to a trained obstetrician's care and delivery in a modern obstetric suite? . . . Except in a very few deprived areas, is there a place for nurse-midwives in the United States? I think not!"[65]

This is not to suggest that the medical profession has been unanimous in its opposition to nurse-midwifery. A significant minority of highly influential physicians have always supported the nurse-midwife. For example, Dr. Louis Hellman, obstetrician and author of several well-known obstetric texts, played a prominent role in influencing the American College of Obstetricians and Gynecologists to recognize and endorse the nurse-midwife as part of the obstetric team in 1971. But physician support for nurse-midwifery has almost always been qualified. As long as nurse-midwives have posed no professional threat to obstetricians, they have been able to win the approval of some physicians. Whenever they have attempted to establish independent practices, physician support has usually been abandoned.[66]

Physicians have been much more vehement in opposing independent

midwifery than nurse-midwifery. In addition to using their professional networks to prevent their colleagues from supporting independent practitioners, they have also prosecuted midwives for practicing medicine without a license. In states where independent midwifery is legal, they have supported more stringent regulations; where it is illegal, they have opposed the enactment of licensing laws.[67]

Because independent midwives typically attend home births, physician opposition to home deliveries has also served to undercut their position. Many physicians believe that home births represent an irresponsible risk to the mother and child.[68] Yet the available, but limited, statistics relating to the outcomes of home births have indicated that maternal and infant mortality is quite low, and that home birth is a safe alternative for women with normal pregnancies.[69]

Concern about the nation's maternal and infant mortality rates is another component of the contemporary midwife debate which also figured prominently into the early twentieth-century controversy. Physicians generally take credit for the precipitous drop in the maternal and infant death rates that have occurred over the past several decades. They attribute this decline to improved obstetric care and the movement of birth to the hospital. They maintain that the return of midwife-attended home births will result in lower childbearing standards and an accompanying rise in the rate at which pregnant women and infants die.[70]

Midwife proponents take issue with the arguments of the physicians. They point out that the infant mortality rate of the United States, which presently stands at 12.6 births per one thousand live births, ranks behind that of fifteen other industrialized nations. They have also expressed particular concern over the differential rates of infant mortality between black and white babies. Black infants die at approximately twice the rate of white infants, and in some poverty areas of the United States, the infant death rate exceeds that of Third World countries. Although the United States is listed among the low maternal mortality countries of the world, recent studies have indicated that there is some evidence to suggest that maternal mortality has been significantly under-reported in recent years.[71] For a variety of reasons, therefore, supporters of the midwife have found the maternal and infant mortality record of physicians to be deficient.

The ambiguous legal status of the midwife is an additional aspect of the current debate whose roots can be traced to the early decades of the twentieth century. Midwifery legislation is presently distinguished by its lack of uniformity. As was true for the early twentieth century, no two states provide for their midwives in exactly the same way. Furthermore, the rules and regulations governing nurse-midwives are usually different from those governing independent midwives.[72]

While the nurse-midwife has been granted legal status in all but two

states, the scope of her practice is often limited due to restrictive clauses in the laws. Her position is further complicated by the fact that five different types of agencies, boards, and committees have been granted regulatory powers. An extensive study of nurse-midwifery legislation, conducted by the American College of Nurse-Midwives in 1983, concluded that "the clearest trend to come from this survey is that uniform state regulation of nurse-midwifery is not happening."[73]

The legal status of the independent midwife is also difficult to ascertain. The 1983 survey conducted by the American College of Nurse-Midwives found that there were only twelve states which licensed midwives not certified by the college. In two other states, independent midwifery was legal, but the issuance of licenses was not required. Eight states were in the process of phasing out independent practitioners by refusing to grant new licenses. Because of the numerous legal problems which independent midwives have encountered in their efforts to qualify under state midwifery laws, many have chosen to practice without a license.[74]

The lack of adequate training programs for midwives is yet another problem which also existed during the early twentieth century. Approximately 250 students are graduated each year from the twenty-eight schools of nurse-midwifery presently accredited by the American College of Nurse-Midwives. However, all of these programs are highly competitive, and many well-qualified candidates must be turned away.[75]

Independent midwives are generally more concerned with apprenticeship training than the establishment of formal schools. When independent midwives have attempted to establish formal schools, however, they have encountered considerable resistance from the medical profession and state health officials. The predicament of Florida's independent midwives perhaps best typifies this situation. In 1982 the Florida legislature adopted a modern Midwifery Practice Act, replacing an older law. It incorporated safe practice standards and provisions for the establishment of schools to train new midwives. Persuaded by the arguments of the powerful medical profession, an amendment to the law was approved in the fall of 1984 providing that no new students could be enrolled in the two recently established midwifery schools. In effect, this 1984 amended law made the practice of independent midwifery in Florida illegal.[76]

It would be wrong to suggest that the current midwifery debate and the early twentieth-century controversy are completely analogous. There are some significant differences between the two eras. While most early twentieth-century midwives attended the births of poor immigrant and black women, contemporary midwifery has experienced its greatest strength among the middle and well-to-do classes.[77] Early twentieth-century midwives went about their work in an isolated and unobtrusive

manner; modern day midwives have recognized the need to establish professional organizations of their own.

Most nurse-midwives regard the American College of Nurse-Midwives as the professional organization which best represents their needs and concerns. In recent years, however, some nurse-midwives have begun to express their dissatisfaction with the college's requirement that certified midwives also be registered nurses. Arguing that the nurse-midwife is neither a nurse practitioner nor a junior medical practitioner, they have called for the separation of midwifery from both nursing and medicine.[78]

In response to the growing concern about the midwife's professional identity, a group of like-minded nurse-midwives and independent midwives in attendance at the 1982 annual meeting of the American College of Nurse-Midwives formed a new organization, the Midwives' Alliance of North America (MANA). Unlike the ACNM, the Midwives' Alliance does not feel that nursing must always be a prerequisite for midwifery. MANA is open to all midwives—both nurse-midwives and independent midwives—regardless of their educational background or legal status. Moreover, the MANA position on certification is that this is a voluntary process.[79] The success of MANA has helped to prompt the establishment of a number of local and regional midwifery alliances. Nevertheless, the political clout of all of these organizations in no way measures up to the power and influence exerted by the medical profession.[80]

One final and significant point of difference between the midwife debate of today and the early twentieth-century controversy is that modern-day midwifery is distinctly viewed as a woman's issue. Early twentieth-century feminists largely ignored the midwife, but this is clearly not true of the situation which presently exists. American feminists have repeatedly expressed support for the midwife in their publications and public pronouncements. Their support has played an instrumental role in the midwife's recent comeback.[81]

Over the past eight decades, American midwifery has endured in the face of overwhelming obstacles. Confronted by a predominantly hostile and powerful medical establishment, the midwife survived the early twentieth-century efforts to eradicate her. Although her numbers had been greatly reduced, she had not been defeated. Indeed, the seed had been planted for the emergence of a new type of midwife: the professionally trained and certified nurse-midwife. But the time was not ripe for the widespread acceptance of nurse-midwifery. Most pregnant women preferred to give birth in hospitals where they could be attended by specially trained physicians.

Not until the late 1960s did large numbers of Americans begin to raise serious objections about the medicalization of birth. Due largely to the tireless efforts of natural childbirth proponents and feminist health ad-

vocates, a comprehensive critique of American childbirth began to take shape. It was at this time that increasing numbers of women, particularly middle-class and well-to-do women, began seeking out nurse-midwives and "independent" midwives to attend their births. By the mid 1970s, a midwifery renaissance was underway. While it is unlikely that midwives will find it possible to reclaim the preeminent position which they once held, the events of the last decade suggest that American midwifery will grow and prosper in the coming years.

NOTES

1. For information on the history of midwives prior to 1900, see Jane B. Donegan, *Women & Men Midwives: Medicine, Morality, and Misogyny in Early America* (Westport, CT: Greenwood Press, 1978); Jean Donnison, *Midwives and Medical Men: A History of Inter-Professional Rivalries and Women's Rights* (New York: Schocken Books, 1977); Judy Barrett Litoff, *American Midwives: 1860 to the Present* (Westport, CT: Greenwood Press, 1978); Barbara Ehrenreich and Deirdre English, *Witches, Midwives and Nurses: A History of Women Healers* (New York: Feminist Press, 1973).

2. Most late nineteenth-century manuals for mothers and pregnant women were written with the assumption that the parturient woman would hire both a physician and monthly nurse for her confinement. See, for example, Pye Henry Chavasse, *Woman as a Wife and Mother* (Philadelphia: W. B. Evans, 1870), pp. 189–193; John H. Dye, *Painless Childbirth; or Healthy Mothers and Healthy Children* (Silver Creek, New York: Brown, Elliott & Spears, 1884), pp. 156–157; Anna M. Fullerton, *A Handbook of Obstetrical Nursing for Nurses, Students and Mothers* (Philadelphia: P. Blakiston, Son & Company, 1886), pp. 65–82; George H. Napheys, *The Physical Life of Woman: Advice to the Maiden, Wife and Mother* (Philadelphia: David McKay, 1890), pp. 244–245; Prudence B. Saur, *Maternity: A Book for Every Wife and Mother* (Chicago: L. P. Miller, 1891), pp. 217–219; Alice B. Stockham, *Tokology: A Book for Every Woman* (Chicago: Sanitary Publishing Company, 1885), p. 163; Tullio Suzzara Verdi, *Maternity: A Popular Treatise for Young Wives and Mothers* (Philadelphia: F. E. Boeriche, 1885), p. 131.

3. Nettie McGill, *Infant-Welfare Work in Europe: An Account of Recent Experiences in Great Britain, Austria, Belgium, France, Germany, and Italy*, United States Department of Labor, Children's Bureau Publication, No. 76 (Washington, D.C.: Government Printing Office, 1921).

4. See, for example, Eugene R. Declercq and Richard A. Lacroix, "The Immigrant Midwives of Lawrence, Massachusetts: The Conflict Between Law and Culture, 1890–1920," paper presented at the Fifty-Fifth Annual Meeting of the American Association for the History of Medicine, Bethesda, Maryland, April 29, 1982.

5. Helen M. Dart, *Maternity and Child Care in Selected Rural Areas of Mississippi*, United States Department of Labor, Children's Bureau Publication, No. 88 (Washington, D.C.: Government Printing Office, 1921), p. 27; Viola I. Paradise, *Maternity Care and the Welfare of Young Children in a Homesteading County in Montana*, United States Department of Labor, Children's Bureau Publication, No. 34

(Washington, D.C.: Government Printing Office, 1919), pp. 30–32; Elizabeth Moore, *Maternity and Infant Care in a Rural County in Kansas*, United States Department of Labor, Children's Bureau Publication, No. 26 (Washington, D.C.: Government Printing Office, 1917), pp. 22–23.

6. Due to the dearth of primary source materials, it is difficult to present a composite picture of the turn-of-the-twentieth-century midwife. One very valuable source is the *American Midwife*, a monthly journal published in 1895 and 1896 by Dr. A. A. Henske, a founder of the St. Louis College of Midwifery.

7. Estelle B. Hunter, *Infant Mortality: Results of a Field Study in Waterbury, Connecticut: Based on Births in One Year*, United States Department of Labor, Children's Bureau Publication, No. 29 (Washington, D.C.: Government Printing Office, 1918), p. 45; Jessamine S. Whitney, *Infant Mortality: Results of a Field Study in New Bedford, Massachusetts: Based on Births in One Year*, United States Department of Labor, Children's Bureau Publication, No. 68 (Washington, D.C.: Government Printing Office, 1920), p. 31; F. Elisabeth Crowell, "The Midwives of New York," *Charities and the Commons*, 17 (January 1907), 668; Dart, *Maternity and Child Care*, pp. 27–32.

8. S. Josephine Baker, "Discussion," *Transactions of the American Association for the Study and Prevention of Infant Mortality*, 3 (1912), 252; "Report of the Midwife Survey in Texas," mimeographed (Texas State Board of Health, 1924), 3.

9. The Bureau of the Census did not begin publishing statistical information with regard to attendants at births until 1937. Most turn-of-the-twentieth-century observers estimated that at least 50 percent of all births were attended by midwives. See, for example, Thomas Darlington, "The Present Status of the Midwife," *American Journal of Obstetrics and the Diseases of Women and Children*, 63 (1911), 870; Grace Abbott, "The Midwife in Chicago," *American Journal of Sociology*, 20 (March 1915), 684.

10. Grace L. Meigs, *Maternal Mortality from All Conditions Connected with Childbirth in the United States and Certain Other Countries*, United States Department of Labor, Children's Bureau Publication, No. 19 (Washington, D.C.: Government Printing Office, 1917), pp. 7, 17.

11. Dorothy E. Bradbury, *Five Decades of Action for Children: A History of the Children's Bureau*, United States Department of Labor, Children's Bureau Publication, No. 358 (Washington, D.C.: Government Printing Office, 1962), p. 6.

12. The ramifications of "scientific" obstetrics are carefully analyzed in Judith Walzer Leavitt, " 'Science' Enters the Birthing Room: Obstetrics in America since the Eighteenth Century," *Journal of American History*, 70 (September 1983), 281–304.

13. On the evolution of "demonstrative midwifery," see Virginia G. Drachman, "The Loomis Trial: Social Mores and Obstetrics in the Mid-Nineteenth Century," in *Women and Health in America*, ed. Judith Walzer Leavitt (Madison: University of Wisconsin Press, 1984), pp. 166–174. For information on the lack of clinical training in obstetrics during the early years of the twentieth century, see the comments of Dr. Florence Sherbon, *Transactions of the American Association for the Study and Prevention of Infant Mortality*, 7 (1916), 63–64; and J. Whitridge Williams, "Medical Education and the Midwife Problem in the United States," *Journal of the American Medical Association*, 58 (January 1912), 1–2.

14. Julius Levy, "Maternal Morbidity and Mortality in the First Month of Life

in Relation to Attendant at Birth," *American Journal of Public Health*, 13 (February 1913), 90–91, 95; S. Josephine Baker, "Maternal Mortality in the United States," *Journal of the American Medical Association*, 89 (December 1927), 2017.

15. Williams, "The Midwife Problem," 5.

16. White House Conference on Child Health and Protection, *Fetal, Newborn, and Maternal Morbidity and Mortality* (New York: The Century Company, 1933), pp. 18, 217–218; *Medical Care for the American People: The Final Report of the Committee on the Costs of Medical Care* (Chicago: University of Chicago Press, 1932), pp. 122–127; Ransom S. Hooker, *Maternal Mortality in New York City: A Study of All Puerperal Deaths, 1930–1932* (New York, The Commonwealth Fund, 1933), pp. 32–33, 186, 209, 214. See also Joyce Antler and Daniel M. Fox, "The Movement toward a Safe Maternity: Physician Accountability in New York City, 1915–1940," *Bulletin of the History of Medicine*, 50 (1976), 569–595.

17. Louis S. Reed, *Midwives, Chiropodists and Optometrists: Their Place in Medical Care* (Chicago: University of Chicago Press, 1932), pp. 4, 13–16, 20, 22.

18. White House Conference on Child Health and Protection, *Fetal, Newborn, and Maternal Morbidity and Mortality*, pp. 18, 217–218.

19. Litoff, *American Midwives*, Chapter 5.

20. This debate was first examined by Frances E. Kobrin in her now classic article, "The American Midwife Controversy: A Crisis of Professionalization," *Bulletin of the History of Medicine*, 40 (July-August 1966), 350–363.

21. See, for example, Charles E. Ziegler, "The Elimination of the Midwife," *Transactions of the American Association for the Study and Prevention of Infant Mortality*, 3 (1912), 222–223, 258; and George W. Kosmak, "Does the Average Midwife Meet the Requirements?" *Transactions of the American Association for the Study and Prevention of Infant Mortality*, 3 (1912), 250.

22. J. Whitridge Williams, "The Midwife Problem and Medical Education in the United States," *Transactions of the American Association for the Study and Prevention of Infant Mortality*, 2 (1911), 165–197. A condensed version of this article was published under the title "Medical Education and the Midwife Problem in the United States," *Journal of the American Medical Association*, 58 (January 1912), 1–7.

23. Ziegler, "The Elimination of the Midwife," 231, 235; James L. Huntington, "The Midwife in Massachusetts: Her Anomalous Position," *Boston Medical and Surgical Journal*, 168 (March 1913), 419. On the "overcrowding" of the medical profession during the early decades of the twentieth century, see Gerald E. Markowitz and David Karl Rosner, "Doctors in Crisis: A Study of the Use of Medical Education Reform to Establish Modern Professional Elitism in Medicine," *American Quarterly*, 25 (March 1973), 83–107.

24. An example of the "necessary evil" argument can be found in J. Clifton Edgar, "The Education, Licensing and Supervision of the Midwife," *American Journal of Obstetrics and the Diseases of Women and Children*, 73 (March 1916), 385–398.

25. The growth of medical professionalism is detailed in Rosemary Stevens, *American Medicine and the Public Interest* (New Haven: Yale University Press, 1971).

26. Carolyn Conant Van Blarcom, *The Midwife in England: Being a Study in England of the Working of the English Midwives Act of 1902* (Philadelphia: William F. Fell Company, 1913), p. 15.

27. Information on S. Josephine Baker can be found in her autobiography, *Fighting for Life* (New York: Macmillan Company, 1939); "Supervision of Midwives in New York City," *Weekly Bulletin*, Department of Health, City of New York, 10 (May 1921), 153, 157.

28. Henry B. Costill, "Midwifery Supervision Succeeds in New Jersey," *Nation's Health*, 8 (April 1926), 255–257; Levy, "Maternal Mortality," 90–91, 95.

29. For a critical examination of the work of early twentieth-century midwives, see Crowell, "The Midwives of New York," 667–677.

30. Reed, *Midwives*, pp. 4, 13–16.

31. See, for example, the arguments of Joseph B. De Lee, "The Prophylactic Forceps Operation," *American Journal of Obstetrics and Gynecology*, 1 (1920), 34–44.

32. On the problems which women encountered as they sought entry into the medical profession, see Mary Roth Walsh, *"Doctors Wanted: No Women Need Apply": Sexual Barriers in the Medical Profession, 1835–1975* (New Haven: Yale University Press, 1977).

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34. A concise history of the Sheppard-Towner Act can be found in J. Stanley Lemons, *The Woman Citizen: Social Feminism in the 1920s* (Urbana, IL: University of Illinois Press, 1973); Joe P. Bowdoin, "The Midwife Problem," *Transactions of the Section on Preventive Medicine and Public Health of the American Medical Association* (1928), p. 94; Mary Evelyn Leith, "The Development of Midwife Education in South Carolina, 1919–1946" (M.A. thesis, Yale University, 1948).

35. Declercq and Lacroix, "The Immigrant Midwives of Lawrence, Massachusetts."

36. J. A. Foote, "Legislative Measures Against Maternal and Infant Mortality," *American Journal of Obstetrics and the Diseases of Women and Children*, 80 (1919), 534–551; White House Conference on Child Health and Protection, *Obstetric Education* (New York: The Century Company, 1932), pp. 178–191.

37. Morris J. Vogel, *The Invention of the Modern Hospital: Boston, 1870–1930* (Chicago: University of Chicago Press, 1980).

38. Reed, *Midwives*, p. 5; "Midwives Dwindle Under Immigration Restrictions," *Journal of the American Medical Association*, 93 (October 1929), 1317.

39. Wilson H. Grabill, Clyde V. Kiser, and Pascal K. Whelpton, *The Fertility of American Women* (New York: John Wiley & Sons, 1958), pp. 3, 27; For examples of this new attitude toward childbirth, see M. Beatrice Blankenship, "Enduring Miracle," *Atlantic*, 152 (October 1933), 409–415; Marine Davis, "Childbirth," *Pictorial Review*, 40 (October 1938), 18–19, 66–67; Jennings C. Litzenberg, "A Child Is to Be Born," *Hygenia*, 4 (June 1926), 306–308; Louise Zabriskie, "Expectant Mothers: Preparing for the Baby's Birth," *Parents' Magazine*, 6 (March, 1931), 70–71.

40. Carolyn C. Van Blarcom, "Visiting Obstetrical Nursing," *Transactions of the American Association for the Study and Prevention of Infant Mortality*, 2 (1911), 349; Clara D. Noyes, "The Training of Midwives in Relation to the Prevention of Infant Mortality," *American Journal of Obstetrics and the Diseases of Women and Children*, 66 (1912), 1057. On the early history of nurse-midwifery, see M. Theo-

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42. Dye, "Mary Breckinridge," 501–502; Eunice M. Ernst and Karen A. Gordon, "53 Years of Home Birth Experience at the Frontier Nursing Service—1925–1978," in *Compulsory Hospitalization: Freedom of Choice in Childbirth*, Vol. 2, eds. David Stewart and Lee Stewart (Marble Hill, MO: Napsac Reproductions, 1979), pp. 505–516.

43. Maternity Center Association, *Twenty Years of Nurse-Midwifery, 1933–1953* (New York: Maternity Center Association, [1955], pp. 39, 54–61.

44. Letter from Aileen Hogan, July 11, 1974.

45. *Nurse-Midwife Bulletin*, 1 (May 1954; July 1954); "Editorial," *Bulletin of the American College of Nurse-Midwives*, 14 (August 1969), 68.

46. Phyllis Burosh, "Physicians' Attitudes toward Nurse-Midwives," *Nursing Outlook*, 23 (July 1975), 453–456; Seth B. Goldsmith, John W. C. Johnson and Monroe Lerner, "Obstetricians' Attitudes Toward Nurse-Midwives," *American Journal of Obstetrics and Gynecology*, 111 (September 1971), 111–118.

47. "Joint Statement on Maternity Care," *Journal of Nurse-Midwifery*, 20 (Fall 1975), 15.

48. Neal Devitt, "The Transition from Home to Hospital Birth in the United States, 1930–1960," *Birth and the Family Journal*, 4 (Summer 1977), 47–58; United States Bureau of the Census, *Statistical Abstract of the United States: 1984* (Washington, D.C.: Government Printing Office, 1984), p. 66.

49. For an examination of women's perceptions of childbirth, see Judith Walzer Leavitt and Whitney Walton, " 'Down to Death's Door': Women's Perceptions of Childbirth in America," in *Women and Health in America*, ed. Leavitt, pp. 155–165.

50. Devitt, "The Transition from Home to Hospital Birth," 57; Antler and Fox, "The Movement toward a Safe Maternity," 592; Sam Shapiro, Edward R. Schlesinger, and Robert E. L. Nesbitt, Jr., *Infant, Perinatal, Maternal, and Childhood Mortality in the United States* (Cambridge, MA: Harvard University Press, 1968), p. 145.

51. This loss of autonomy is carefully detailed in Leavitt and Walton, " 'Down to Death's Door,' " in *Women and Health in America*, ed. Leavitt, pp. 155–165.

52. A concise history of the natural childbirth movement can be found in Margarete Sandelowski, *Pain, Pleasure, and American Childbirth: From the Twilight Sleep to the Read Method, 1914–1960* (Westport, CT: Greenwood Press, 1984), Chapters 4 and 5.

53. Sandelowski, *Pain, Pleasure, and American Childbirth*, pp. 136–137.

54. Two recent works on the history and philosophy of the "second wave" of feminism are Sara Evans, *Personal Politics: The Roots of Women's Liberation in the Civil Rights Movement & the New Left* (New York: Alfred A. Knopf, Inc., 1979);

and Gayle Graham Yates, *What Women Want: The Ideas of the Movement* (Cambridge, MA: Harvard University Press, 1975).

55. One early and influential publication concerned with women's health was the Boston Women's Health Collective, *Our Bodies, Ourselves: A Book By and For Women* (New York: Simon and Schuster, 1971). Another useful source is *Network News*, published by the National Women's Health Network.

56. See, for example, Suzanne Arms, *Immaculate Deception: A New Look at Women and Childbirth in America* (Boston: Houghton Mifflin Company, 1975); Suzanne Arms, "Why Women Should Be in Control of Childbirth and Feminine Health Services," in *21st Century Obstetrics Now!*, Vol. 1, eds. Lee Stewart and David Stewart (Marble Hill, MO: Napsac, Inc., 1977), pp. 73–88; Barbara Katz Rothman, *In Labor: Women and Power in the Birthplace* (New York: W. W. Norton, 1982); Robin Warshaw, "The American Way of Birth: High Tech Hospitals, Birthing Centers, Or No Options at All," *Ms.*, 13 (September 1984), 45–50, 130.

57. See, for example, the statements of Marion Sousa, *Childbirth at Home* (New York: Bantam Books, 1977), pp. 2–3, and Sheila Kitzinger, *Birth at Home* (New York: Penguin Books, 1981), pp. 2–3.

58. Examples of this can be found in the publications of the National Association of Parents and Professionals for Safe Alternatives in Childbirth. See especially Stewart and Stewart, *21st Century Obstetrics Now!*, Vols. 1 and 2.

This does not mean that natural childbirth proponents and feminist health advocates necessarily share similar views on related issues such as motherhood, birth control, abortion, or the family.

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79. "Midwives Form New Alliance," *Network News* (January/February 1983), 3; "Standards and Practice Committee Responds to Alternative Proposal," *MANA News*, 2 (September 1984), 6–7; DeVries, "Midwifery Licensure and Strategies of Dominance," 15.

80. Two such alliances include the Massachusetts Midwives Alliance and the Florida Midwives Association.

81. The 1984 MANA convention included a session, "Midwifery as a Woman's Issue." For a summary of the convention proceedings, see "Convention '84 . . . a Big Success," *MANA News*, 2 (November 1984), 1–2.

II

Rediscovering the Midwife

At the dawn of the twentieth century, it appeared that the American midwife would soon become a relic of a bygone era. Few, if any, Americans could have predicted that within the ensuing decade the medical community and to a lesser extent, the general public would become embroiled in a vehement debate over her present and future role. Yet events were already underway which would ensure that the midwife would eventually come under the public's scrutiny.

Of particular importance was the arrival of millions of immigrants from southern and eastern Europe on American shores. Midwifery was an honored and well-established profession throughout much of Europe, and recently arrived immigrants naturally turned to midwives for assistance during childbirth. Indeed, the cities of the urban northeast and midwest, where the immigrants most often settled, began experiencing an unexpected revival of midwifery at this time.

Coupled with the new visibility accorded the midwife was the recognition that the infant and maternal mortality rates of the United States were alarmingly high. In an effort to discover why so many mothers and infants were dying, the qualifications and skills of birth attendants—both midwives and physicians—were carefully examined.

The selections included in this chapter focus on the events leading up to the "rediscovery" of the American midwife. The 1899 *Annual Announcement* of the Playfair School of Midwifery of Chicago represents a very early effort to train and regulate midwives. Unfortunately, reputable training programs, such as the one offered at the Playfair School of Midwifery, were the very rare exception. Throughout the twentieth

century, in fact, the success of midwifery has often been hampered by a lack of adequate training programs.

F. Elisabeth Crowell's article, "The Midwives of New York," published in *Charities and the Commons* in 1907, examines the quality of care provided by New York City's mostly immigrant midwives. Classifying less than 10 percent of the five hundred midwives she investigated as "capable," Crowell depicted most of the midwives of New York City to be illiterate, dirty, and inadequately trained. However, she did not feel that this deplorable situation was entirely the fault of the midwives. Arguing that many European countries successfully trained and regulated their midwives, Crowell chided the health officials of New York City for not doing likewise. "The Midwives of New York" prompted that city to revise and tighten up its laws pertaining to midwives. In addition, Crowell's report served as a model for scores of other cities and towns which subsequently undertook surveys of their midwifery situation.

Maternal Mortality from All Conditions Connected with Childbirth, published by the federal Children's Bureau in 1917, is included in this chapter because of the pivotal role which it played in awakening the nation to the fact that thousands of pregnant women were needlessly dying each year. The Children's Bureau probably did more to alert the nation to this problem than any other organization. Although most deaths associated with childbirth were judged to be "preventable," the Children's Bureau reported that there had been no decrease in the maternal death rate over the last quarter of a century. This disclosure was particularly disturbing since the death rate for typhoid, diphtheria, tuberculosis, and other preventable diseases had been substantially reduced during the same time span. Equally alarming was the revelation that only two of the fifteen major "civilized" nations of the world had maternal mortality rates higher than that of the United States.

In an attempt to pinpoint the reasons for this high maternal death rate, the Children's Bureau cited the difficulty of attaining adequate obstetrical care and the general ignorance of the need for good care during pregnancy and parturition. Significantly, *Maternal Mortality* made only one brief reference to the problems associated with untrained midwives, concentrating instead on the need to upgrade the status and profession of obstetrics.

Over the course of the next two decades, the Children's Bureau published more than twenty-five reports on the maternal and infant mortality rates of various localities throughout the United States. Many of these publications provide valuable information about the practices of early twentieth-century midwives. Moreover, the maternal and infant mortality studies of the Children's Bureau prompted many local and state health departments to investigate the quality of care provided by their midwives and physicians.

The last selection in this chapter, "Report on the Midwife Survey in Texas," published in 1924 by the Texas Bureau of Child Hygiene, is illustrative of the investigatory reporting that occurred after the "rediscovery" of the midwife. While earlier inclusions in this chapter were concerned with immigrant midwives of the urban northeast and midwest, the Texas report focuses on black, mostly rural, "granny" midwives of the south. Among southern blacks, midwives attended as many as 90 percent of all births during the early decades of the twentieth century. A particularly valuable feature of this report is the inclusion of the verbatim responses of Texas women in which they discussed their reasons for choosing either midwives or physicians as birth attendants.

1. *The Playfair School of Midwifery: Annual Announcement, 1899*

The universe shall henceforth speak for you
And witness, She who did this thing, was born
To do it; claims her license in her work,
And so with more works.—*Aurora Leigh*

INTRODUCTION

History records that since the time of Moses, midwifery has always been mainly in the hands of women and in many countries of Europe no other usage has ever prevailed. The first regular French medical society included within its organization the "Company of Midwives," and from that time down to the present it has been the custom in France to give to these women a regular education, terminating in sufficient examinations. Other countries in Europe do the same and in no other country than our own, except England, has the practice of midwifery received so little attention and fallen into so general disrepute.

The name assigned to the practitioner, "midwife," and its Latin synonym "obstetrix," further show the art to have been considered essentially a woman's work and in neither language is there a masculine equivalent. According to Dr. Aveling, who has given us a large amount of very interesting information about the history and position of midwives in England, we find that not only were there no provisions for instruction, except such as were afforded by the clergy, but that this instruction referred especially to their duties in baptism of the child, and cautioned them against the practice of charms or sorcery while in attendance on the woman. Birth records were kept by the church and the curates were the only instructors. No books on midwifery were allowed to be published either by the midwife or by physicians (it being considered highly indecent) until in 1653 Dr. Harvey published one. However, up to that time the prejudice to a male attendant in time of labor was so great that not until the invention of forceps by Peter Chamberlen, and the idea fostered by male practitioners "that a surgical instrument must be controlled by the hand of a surgeon," was it possible for a male practitioner to gain admittance to the lying-in chamber.

Source: *The Playfair School of Midwifery: Annual Announcement, 1899*. Chicago, 1899.

Women of good education and social standing, who had obtained their training on the continent, were to be found following this calling and were held in high esteem, much as our trained nurse of today, but as the possibility of obtaining proper instruction in this special branch grew less and the practice of employing male physicians became more general, midwifery gradually fell into the hands of the poorer and more ignorant women. Up to the present time, in America, the practice of midwives has had very little attention from the profession or lawmakers except to condemn and restrict and consequently *our* midwifery practice is in very much the same condition.

Owing to the fact that the population of America is so largely made up of the foreign element, among whom it is universally customary to employ a midwife, it is plainly evident that the demand for her will not decrease. At present the midwives are likewise largely foreigners who, if trained at all, are more or less ignorant of the laws and customs of this country, and owing to the defective legislation in regard to their practice we are constantly confronted with the faults which result from our want of appreciation of their needs (since our laws recognize their rights to exist) and only by educating and training can we hope to solve the problem of perfecting their system of work and properly controlling it.

In Chicago alone, about 2–5 of the births, i.e., about 25,000 women annually, are attended by midwives. In the country districts in other states as well as in this there is a demand for women trained in this branch especially, to assist the general practitioner. This is well demonstrated by the fact that many of our students have been sent to us direct by physicians in need of such service, and the results have been very gratifying.

As a rule, the patients who employ midwives only cannot afford to employ a physician even if they could obtain his service for a very low fee, for they would still be in need of a nurse.

It is the object of the Playfair School of Midwifery to furnish instruction to capable and intelligent women in the art of attending her fellow-woman in labor, and caring for the mother and child during the lying-in period in accordance with our latest and best knowledge, and to interest such a class of women in this work that by proper opportunities of instruction we will remove the present prevailing prejudice against the midwife and finally restore her to her proper reputable position in the profession, not as a competitor to the physician but able to conduct normal labor with safety, and, what is perhaps of greater importance, to recognize early the nature of pathological cases and send for the timely help of the physician.

It is also one of the most important objects of the school to teach the midwifery students the rules of conduct that should govern them in

order that they may become safe advisers for their patients in the moral perplexities that are sure to arise in their practice.

We are also exceptionally well prepared to furnish opportunity for training to such women as do not care to fully qualify themselves as midwives but who desire to obtain sufficient training to do obstetrical nursing. For these, we have a special certificate for obstetrical nursing which is given at the end of five months' attendance and the necessary clinical work.

Midwives already in practice are cordially invited to attend any or all of the courses, and specimens for our museum and reports of interesting cases are earnestly solicited. Graduate nurses of regular training schools, who desire more work in obstetrics than is procurable in the general hospital training, are urged to investigate this for the special advantages it offers them as a post-graduate course.

The school has been in existence over three years and has more than kept its promises to its students in providing thorough theoretical and clinical instruction. Many students have had an opportunity to attend more than the twelve cases required for graduation. Because of its high grade requirements of students who graduate and its superior merits as a school we have obtained the recognition of the Illinois State Board of Health, which permits its graduates to practice midwifery without further examination.

"OFFICE OF THE SECRETARY
"ILLINOIS STATE BOARD OF HEALTH,
"SPRINGFIELD, November 19, 1897.

"Effie L. Lobdell, M.D.,

"*Secretary Playfair School of Midwifery, Chicago.*

"DEAR DOCTOR: At the regular meeting of the Illinois State Board of Health, held in Chicago, October 5, 1897, a resolution was passed recognizing the diplomas of the Playfair School of Midwifery, issued after October, 1897, in full, without examination.

"Respectfully,

"(Signed) J. A. Egan, *Secretary.*"

The school has three graduates now practicing and several, who have attended one term and received their certificate as Obstetrical Nurse are also practicing in Wisconsin, Michigan, Ohio, Indiana and Pennsylvania.

The school in its hospital, dispensary and out-practice departments has cared for about 500 cases. The nationalities attended have been American, Greek, Irish, Italian, German, Swede, Bohemian, Polish, Norwegian, Danish, Finnish, Belgian, Holland, French, Hungarian, English, Negro, Russian. The ages of the patients have ranged from 14 to 42 years.

Recently there has been added to the plant a Playfair Home for Midwife Students where out of town pupils may procure lodging, etc., at very reasonable rates. This home is associated with the Lying-In Dispensary, which is open night and day to patients, with special hours for clinic, to which the student is admitted. This is located in a district which furnishes abundant material and practice. A physician is constantly in attendance to accompany a pupil midwife to a case.

We solicit the co-operation of physicians in our work. . . .

REQUIREMENTS FOR ADMISSION

All applicants for admission must furnish:

1. A certificate of good moral character, signed by a minister or a physician in good standing.
2. Evidence of their ability to read and write correctly in English or German.

ADMISSION TO ADVANCED STANDING AND SPECIAL COURSES

Midwives graduated from other recognized schools, or those who are licensed and have been in practice three years, and nurses graduated from reputable training schools, may be admitted to advanced standing by passing an entrance examination and may come up for graduation at the end of one term.

Special arrangements will be made with licensed midwives or graduated nurses, not candidates for a degree, by which they may attend lectures upon payment of the matriculation fee.

Anyone, not a candidate for graduation, who desires special instruction in any branch taught in the school, may enter the class upon matriculating and paying the fee for such course.

PLAN OF INSTRUCTION

The course comprises two terms of five months each. It consists of daily teaching of three hours daily, from 9 to 12 o'clock, a.m., by lectures, demonstrations, recitations, laboratory work and frequent examinations, with practical observation and nursing of cases of labor and child-bed.

Instruction is given in English and German. In the laboratory work and some of the demonstrations, both English and German students meet together, explanations being given in one language and repeated in the other. In other cases parallel courses are given to both classes.

METHOD OF INSTRUCTION

General anatomy and physiology, as well as special anatomy and physiology of the pelvis, is taught by lectures and demonstration on the skeleton, cadaver, manikin and charts.

The mechanism of normal labor is very carefully demonstrated on the manikin, while instruction in the pathology of labor is given to enable the students to recognize abnormalities of position and obstruction to delivery in order that the timely assistance of the physician may be called.

The physiology and pathology of pregnancy is also described so that the student may be able to give good advice for the management of normal pregnancy and likewise recognize pathological conditions.

The instruction in the care of mother and child is a course in obstetrical nursing of the most practical character.

The clinical instruction is given in the Playfair Lying-In Hospital Dispensary, which has abundant clinical material.

The students have an excellent opportunity for observation and practical work in the obstetrical wards of several hospitals.

The clinical instruction embraces detailed practical teaching in disinfection, in internal and external examination, in management of labor, in taking of temperature, in care of the breast, also in bathing, clothing and feeding the child.

The course of disinfection is designed to show the nature and danger of bacteria in order to explain the importance and meaning of disinfection. This course will be illustrated by cultures of bacteria, and they will be used to show the principles of inoculation, contamination and growth of bacteria. Students will be given opportunity to make culture for themselves.

The course in chemistry is designed to give an elementary practical knowledge of urinalysis to enable the student to recognize diseases of the kidneys in pregnancy, that she may call for the help of a physician, when necessary, and to teach the nature and danger of chemical disinfectants and the mode of preparing solutions. The use of the thermometer is thoroughly taught.

In embryology the student is taught the origin and growth of the fetus, as well as the anatomy and physiology of the new-born child.

Special courses are also given in the ethics of midwifery and the duties of midwives to each other, to their patient, to the medical profession and to the state; in diseases of the eye of the new-born, etc.

FEES

Not returnable nor transferable to another year.

Matriculation (payable but once)	$ 5.00
General lecture fee	50.00
Hospital ticket (good for one year)	5.00

Laboratory material:

The deposit fee for the use of laboratory materials will be five dollars. This fee will be returned to the student, after deducting cost of material and breakage, at the end of the course.

Next term begins September 4, 1899, and closes January 24, 1900.

Following term begins February 7, 1900, and closes June 27, 1900.

REQUIREMENTS FOR GRADUATION

Candidates for the degree of Graduate Midwife, diploma of which gives the right to practice midwifery in Illinois, must comply with the following requirements:

1. Two terms attendance in a recognized school of midwifery, the last of which shall be in this school.
2. At least 80 per cent attendance on all lectures.
3. Shall have passed satisfactory examinations in all branches taught in the college.
4. Satisfactory evidence of having attended twelve cases of labor.
5. Payment in full of all fees.

Directors reserve the right to expel any pupil at any time for misconduct, or infringement of rules or regulations of this institution.

The student will not be allowed to demand of any patient to whom she may be sent recompense for services or expense.

2. *The Midwives of New York*

F. Elisabeth Crowell

This investigation into the conditions of midwifery practice in New York city was made under the auspices of the Public Health Committee of the Association of Neighborhood Workers. The report was submitted on December 20, 1906, at a special meeting of the Committee held at the New York Academy of Medicine, at which were present representatives of the New York County Medical Society, the King's County Medical Society, the Academy of Medicine, the Board of Health and the New York Obstetrical Society. Miss Crowell is a graduate nurse and was for several years the superintendent of St. Anthony's Hospital in Pensacola, Florida. She is at present assistant secretary of the New York state branch of the Public Health Defense League.

To the physician in his daily battle with disease and suffering, to the lawyer with his wide experience of crime and criminals, to the city official in his endeavor to record carefully and accurately the vital statistics of a great city, to the social worker in his or her intimate daily contact with great masses of humanity who are living on the verge of dependence, the problem of the midwife and her practice has presented itself in varying aspects—professional, criminal or social—but always as a problem of grave importance. It was for the purpose of obtaining that knowledge of conditions and facts indispensable to the solution of any problem that this investigation of midwifery practice both abroad and in this country, but more especially here in New York, was undertaken last February at the instance of the representative body of men and women interested in social work in New York city, the Association of Neighborhood Workers.

Before going into the details of the methods of the investigation and the results thereof, it may not be amiss to give just a word relating to the world-old custom of employing midwives. History and tradition are at one as to its antiquity. In fact, the history of midwifery is the history of the human race. From the earliest ages mothers of all races, Jewish, Egyptian, Greek, Roman, down to the modern European, have called upon the midwife for assistance in child-birth. During thousands of years the care of parturient women was practically entirely in the hands of these midwives. If an unusual or dangerous complication arose, a phy-

Source: F. Elisabeth Crowell, "The Midwives of New York," *Charities and the Commons*, 17 (January 1907), 667–677.

sician was called upon to assist in the delivery, but the process of labor was considered a natural, normal occurrence, requiring ordinarily no interference or aid outside of that to be obtained from women experienced in this form of service.

At the end of the fifteenth century the impetus which the invention of printing had given to all branches of human knowledge was felt in the science of medicine; its branches began to pulse with new life and vigor, and midwifery, which had heretofore been regarded as an art, now began to develop as a science. Here was the physician's opportunity. His development kept pace with the increasing intelligence of the community, while the midwife, when she did not actually retrograde, at least stood still. Universities that were open to physicians were closed to her, opportunities for advancement, for improvement, were denied her; the profession of midwife ceased to be regarded as a profession. The result was inevitable,—a gradual lowering of the standards that had hitherto prevailed among women who devoted themselves to this calling. During the seventeenth century we find the man-midwife, as he was then contemptuously styled, claiming and obtaining his share of obstetrical work. In France fashion set the stamp of her approval upon him, and a few decades later the general introduction of the use of forceps in obstetrical practice entrenched him upon an impregnable point of vantage. But a custom which had been sanctioned by the usage of thousands of years and which was in complete accord with the deepest, most sensitive prejudices of womankind, was not to be lightly set aside. The battle was on. For three hundred years it has waged. Through it all the women of the masses, in their hour of travail, have demanded aid from their sister women, and received it; and this demand, rooted in popular prejudice, nourished by the economic conditions under which these masses struggle for a bare existence, has kept alive the calling of midwife until to-day.

In the beginning of the nineteenth century, Europe generally seems to have accepted the fact that midwives as an institution were an inherent part of the existing social order, a force to be guided and controlled rather than ignored or opposed. Consequently we find many European states at this time providing for their efficient instruction, examining them and licensing their practice. England alone refused to enact legislation affecting the midwife and her practice until 1902.

To-day the training and duties of midwives are practically the same in all parts of Europe. They are admitted to lying-in asylums supported by the government for poor women, and for the training of midwives, where they are taught cleanliness and the physiology of labor theoretically as well as practically. They are under the immediate supervision of trained instructors, and in fact, the European midwife remains under supervision during her entire life time. Her equipment is inspected; she

is prosecuted in case of neglect, and for such neglect her license may at any time be revoked.

From this brief reference to conditions controlling the practice of midwifery abroad it is possible that we may come to a keener realization of our own sins of omission in this regard. I know that many hold the view that such omission is not a sin but a virtue; that any legislative restriction involves a corresponding recognition; and that any such legal recognition is to be regarded as an unmixed evil. Medical men are prone to anticipate any fancied invasion of their own special domain. They argue that any legal recognition of the midwife will create a new order of medical practitioners who, with little skill and less learning, will not hesitate to assume the gravest responsibilities of life and death in connection with the treatment of many ills. Advocates for the special training and education of nurses had to meet and live down opposition upon this same point in the early days of the development of nursing as a profession—the fear of medical men that the nurse would usurp the functions of the physician. To-day the physician is the first to recognize and acknowledge that a large measure of his success depends upon the efficient cooperation of well educated, thoroughly trained nurses, whose very training and education make for a surer recognition of their own limitations. Again, there is urged the impossibility of attracting the better class of women to the profession of midwifery. I admit the difficulty, not the impossibility. That there is a certain stigma attached to the title "midwife," must be granted. The reason can easily be seen when we consider the usual type of woman who follows the calling of midwife in this country. Coming in with the ever increasing tide of immigration, the majority of these so-called midwives are foreigners of a low grade—ignorant, untrained women who find in the natural needs and life-long prejudices of the parturient women of their race a lucrative means of livelihood. With no required standard to meet and no legal regulation of their practice, they are allowed to go on unmolested as long as they are not caught in open violation of the law.

Last year the demand for a midwife's attendance was voiced by 43,834 mothers in greater New York. In other words, forty-two per cent of the total number of births reported for 1905 were attended by midwives. To meet this demand there are in the Borough of Manhattan alone between nine hundred and one thousand practicing midwives. I have seen and interviewed five hundred of them and I give here a few significant facts regarding them, their professional equipment or lack of equipment; and their methods of practice.

I must first explain how I obtained this information. For the purposes of investigation, or for that matter for any other purpose, the register of midwives kept by the Board of Health is utterly inadequate. Midwives are registered there who have been dead these many years. Again, one

midwife is frequently registered under two or three different addresses. And finally, a number of midwives are not registered at all. Out of 500, 249 were incorrectly registered and there were thirty-seven whose names did not appear on the register.

In order to get a fairly complete list of practicing midwives, together with the correct names and addresses, I examined nearly 10,000 birth certificates returned for April and May, 1906, taking for granted that a midwife who did not return a birth certificate within two months either had very little practice and was scarcely worth considering, or else did not report her births. Even with the addresses thus obtained, I found that within two or three months a midwife had frequently changed her address and had to be traced through information given by a friendly housekeeper at the old address, or had moved to another borough, or, in some instances, to another city. Of the 500 visited, about 225 lived on the middle and upper east side, which includes Little Italy; 200 on the lower east side south of Houston street, and seventy-five on the west side from the river up through the Tenderloin district.

The usual method of attack was to ask to see the diploma, stating that I was visiting all the midwives in New York for that purpose. In the majority of cases I was taken for an official inspector from the Board of Health. Where my right to see the diploma was questioned, the production of a letter from the Health Commissioner, stating that I was a representative of the Association of Neighborhood Workers and requesting that information be given to me, was most effectual. Details of age, civil condition, education, professional and general, length of residence in the United States and length of practice were easily obtainable. The bag containing instruments, dressings, etc., was seen in the majority of cases; seventy-two stated that they had no bag; seventy-four that the bag had been left at the home of a patient, or some excuse for not showing it was offered. While looking over the contents of the bag, it was an easy matter to extract information as to the midwife's methods of practice. The condition of the home and the personal cleanliness or uncleanliness of the midwife were also noted.

Classifying according to nationality, I found that out of the 500 midwives twenty-seven per cent were Austro-Hungarians, Bohemians, Austro-Poles; twenty-five per cent Italians; twenty-two per cent Germans; fourteen per cent Russians; that four per cent were born in the United States; two per cent in Ireland, and the remaining six per cent were made up of natives from France, Sweden, Switzerland, England, Scotland, Syria, Turkey, Holland, Belgium, Denmark, Buenos Ayres, and one West Indian negress. While considering the nationality of the midwives it may be interesting to note the result of an analysis of the births reported for the month of April, 1906, according to the nativity of the mothers. The percentage of births reported by midwives for the year,

forty-two per cent, held good for the month as well. Of the total number of births amongst mothers born in the United States, Canada, England, Scotland and Wales, one-sixth were reported by midwives; amongst Germans, thirty-one per cent; amongst Russians, thirty-one per cent; amongst Austro-Hungarians, and Bohemians, sixty per cent, or nearly two-thirds, were reported by midwives; and amongst the Italians,—and this is by far the most significant figure of all—out of 1,029 births, sixty-seven were reported by physicians and the remaining 962, or ninety-three per cent were reported by midwives.

To return to the midwife; I found that twenty-four had resided in this country one year or less, 135 from one to nine years; 168 from ten to nineteen years, and 173 twenty years or over. About one-half were between thirty-five and fifty years of age; one-fourth under thirty-five and one-fourth over fifty years of age. As to their educational qualifications, I was surprised to find the percentage of illiteracy as low as it is. Out of the 500 but fifty-one were unable to read and write, the percentage being highest amongst the Italians and Russians. Thirty per cent were unable to speak English, and here again the Italians were to be found in the lead.

Coming to the question of their professional education, I found 201 holding foreign diplomas. This means that forty per cent of the total number had been properly trained, and had given evidence of having attained a certain required standard of proficiency before such diplomas were granted to them. Forty-three per cent held diplomas from so-called schools of midwifery in this country—with two exceptions, schools conducted here in New York city—or certificates from physicians who, for considerations best known to themselves, have in many instances seen fit to certify to the proficiency of ignorant, incompetent women desiring to practice midwifery. In many instances I am convinced that this collusion between the physician and midwife points to an agreement that he is to be called upon for assistance in all difficult cases, the combination or partnership thus proving a source of revenue for the physician and protection for the midwife. The diplomas of these New York schools are utterly worthless as evidence of training or efficiency on the part of the midwife holding them. In some cases I found that they had been granted to women who were unable to read or write, but who had had the price—$66. There are four such schools in this city. Theoretical knowledge is imparted by the physician in charge three hours each week; practical experience is obtained in the homes of the poor who may have applied to the school for the attendance of a midwife during the expected confinement. Midwives holding such diplomas have told me of being sent to their first cases with no supervision of either a physician or an experienced midwife, of having to conduct the entire labor as best they

could, of their fear of finding the patient dead upon their return visit as a result of their ignorance and want of skill. Three of these schools I feel very certain are being conducted solely for the benefit of the physician in charge—for revenue only. The fourth, for the instruction of the Italian midwives, I am inclined to believe is on a slightly higher plane and is really aiming, however ineffectually, at raising the standard of midwifery practice amongst this nationality. It is not to be counted against a woman that she holds a certificate from one of these diploma mills, but certainly it is a strong indictment against these schools to see the kind of "graduate" they turn out in ever increasing numbers. As a matter of fact I consider the eighty-eight midwives I saw who held no diploma quite as efficient and capable as the 209 who held these worthless New York diplomas.

About three-fifths of the total number visited had been engaged in practice over ten years, while twenty-three had begun to practice within the past year. In the majority of cases the women had taken up the practice of midwifery to eke out the family income, the husband or grown children contributing largely to the actual support of the family; 175, however, were entirely dependent upon their own exertions for their livelihood. The husbands' occupations give some indication of the economic status of the family. They were carpenters, street cleaners, stonemasons, tailors, peddlers, machinists, laborers, bartenders, cooks, waiters, painters, and drivers. Among the Italians were found several musicians, an artist, and an architect; among the Hebrews, several real estate agents and one politician. The husband of one American-born midwife was a policeman. A number of the women have educated their sons as physicians or lawyers.

The homes of these midwives are to be compared with the homes of the women upon whom they attend, the average three-room tenement—clean or dirty, according to the personal habits of the woman who occupies it. Of the midwives' homes 106 were absolutely filthy, as was the clothing and the person of the midwife herself. Of the remaining 394, I should say one-third might be designated as excellent, the other two-thirds fair.

To the medical man the facts concerned with the methods of practice of these women will undoubtedly appeal with greatest force. Three-fifths of the total number visited stated frankly that they would undertake the care and treatment of abnormal cases. Many did not hesitate at the removal of an adherent placenta, others will perform version, and all of them will treat a *post partum* hemorrhage, calling in a physician only when they find themselves entirely unable to cope with the situation at hand. Practically all of them claimed that they used antiseptics, which meant very little if the midwife was dirty, her bag filthy, and if

she appeared generally ignorant and incompetent. There is a chance that antiseptics in the hands of such women may work an infinite deal of harm, for we have no guarantee that they will be properly used.

As for the bags and their equipment, from a professional standpoint by far the greater number would make fit decorations, for a chamber of horrors. Rusty scissors, dirty string, a bit of cotton, a few corrosive sublimate tablets, old rags and papers, some ergot and vaseline, a gum catheter, wires, were the usual contents. Out of 303 bags inspected, thirty-four only were marked as first-class—that is, they were clean and their equipment was complete and sterile.

I was visiting one Italian midwife whose home was of the dirtiest, the condition of whose hands was indescribable, whose clothing was filthy, the condition of whose bag beggars description, when a call came for her to go at once to a confinement. Not wishing the woman to lose a case because of my being there, I told her to make her necessary preparations while I talked. "Oh," she replied, "I am ready," and throwing a shawl over her head and seizing the bag, she was off—to take the life, the future health and well-being of a mother and child into her keeping.

Again, foreign trained midwives who brought out the usual dirty bag for inspection would have, stowed away on top of a wardrobe, behind the stove, or under the bed, a most complete, compact, convenient portable sterilizer, which they had purchased at home and which the law there had compelled them to use. When asked the reason for not using it here the invariable reply was, "It is not necessary, nobody cares what we use; the bag is handier and everyone uses it here." Of those midwives who had no bags, with the few exceptions where the midwife had her clientele amongst people of the better class, who themselves provided everything beforehand, the usual reply was, "I go as I am," and they would show me a bit of string in the pocket and a pair of scissors fastened to the belt; or they would depend upon whatever they chanced to find at the patient's home.

Inquiring as to the after care of the mother and child, I found that the usual length of attendance was for nine days—longer when necessary. Two visits a day are generally made for the first two or three days. The baby was bathed, the cord dressed with powder, and the mother received the necessary attention, in many cases unnecessary attention as well, in the form of douches, the practice of douching being followed by over one half of the midwives as a regular method of procedure independently of any indication of infection. The mother is also bathed and the bed made. An exception to this last statement should be made in case of the Italian midwives, over one-third of whom leave this work for the family to do, not considering it a part of their duties as midwives.

In regard to the care of the child's eyes,—the majority of midwives stated they used borax or boric acid to bathe the eyes and some few use

the nitrate of silver solution prescribed by the Board of Health. With regard to the prevalence of opthalmia neonatorum there are no available statistics for New York city. The provision of the sanitary code regarding the reporting of contagious diseases to the Board of Health within twenty-four hours is practically a dead letter in connection with this particular disease. In October, 1905, the Board of Health made an effort to secure reliable information upon this point by sending out circular letters to all registered physicians and midwives in the city, calling their attention to their duty in the matter of reporting all such cases. The co-operation of the various opthalmic hospitals and dispensaries was also secured. As a result of this movement, about twenty-four cases were reported by the hospitals and dispensaries (but one of which had been attended by a physician at birth) and six cases were reported directly by midwives. For the past two months and a half not a single case has been reported, indicating that those most concerned are relapsing into their former disregard of this particular law.

In this connection I attempted to investigate the cases of opthalmia neonatorum applying for treatment to the various opthalmic hospitals and dispensaries of the city during the past year, but with very unsatisfactory results. In all I secured the names and addresses of some 150 cases. Many had moved from the address given and it was impossible to find any trace of them. Of those seen I found that the numbers attended at birth by physicians equalled, in fact exceeded by one, the number attended by midwives.

I have purposely omitted all reference to the competent, well-trained, reliable midwife. Unfortunately, so far as numbers go she is a negligible quantity. Out of the 500 midwives visited, less than ten per cent could be qualified as capable, reliable midwives. That there were even that many is a hopeful indication and an earnest one of the class of women we might have in this profession if we took the proper method of raising the standard of midwifery practice. I have in mind one woman in particular, a Russian, well educated, whose home showed every evidence of refinement, whose husband and son were both physicians. In the course of many years' practice she had delivered between four and five thousand cases. Speaking of her son's obstetrical practice she said, "That little tad, I taught him all he knows," and nodding to her husband she added, "and I taught him all *he* knows." The husband smilingly confirmed his wife's statement.

We come now to what is by far the darkest chapter in the history of midwifery practice here in New York city. I refer to their criminal work. We cannot limit the question of the midwife and her profession solely to its professional aspect. Considered broadly, it has a deep social significance as well. In reality, the science of midwifery deals with the perpetuation of the human race. As regards the voluntary restriction of

the increase in population, the state recognizes the right of the unborn child to live and endeavors to safe-guard that right by making criminal abortion a felony, but any medical jurist will admit the enormous difficulties to be encountered in any attempt to obtain sufficient evidence to secure a conviction upon this charge. Would it not be the better part of wisdom to adopt a wise policy of prevention by effectually closing the profession of midwifery to illiterate, ignorant, untrained women of doubtful morality, licensing such women only as can meet a high standard of education, training, experience and morals, rather than to pursue the present laissez-faire policy of allowing practically any woman to follow this calling undisturbed, except in the few rare cases where evidence of malpractice be adduced against her? Ignorance and cupidity are ever the faithful hand-maidens of crime. Such midwives, possessing that little knowledge which is a dangerous thing, restrained by no sense of moral responsibility, tempted by the pecuniary reward offered, furnish willing recruits to the ranks of professional abortionists.

To show that the machinery of the criminal law is utterly ineffectual to accomplish the punishment of such women, I need only cite the facts that the records of the coroner's office show an average of three deaths in a month due to criminal abortion, while from the records of the district attorney's office we learn that in the past six years there were but twenty-four prosecutions for criminal abortion. Of these, ten were dismissed by the grand jury, six were discharged at trial, five were acquitted, and three were convicted.

The New York County Medical Society, through its counsel, Champe S. Andrews, has attempted to overcome the difficulty of prosecuting supposed offenders under the existing law, by instituting proceedings against such women (in cases where complaints have been made) in the Court of Special Sessions upon a charge of practicing medicine illegally. In the past five years there have been seventy-one convictions of midwives upon this charge. Of the 500 midwives that I visited I have classified 176 as criminal. Against twenty-eight I had a record of conviction; against twenty-nine a record of investigation, that is, special detectives had been sent to these midwives and they had agreed to perform a criminal operation upon the detective; 119 I classified as suspicious. In some few instances I had received complaints against them from other midwives. I have had women tell me of midwives who had operated upon them or their friends. But by far the larger number themselves furnished all the evidence necessary when they exhibited their bags, containing large gum catheters wired, uterine sounds, dilators, curettes and pessaries, in addition to the customary scissors and string and—dirt. I found thirty-one midwives who received and cared for patients in their own home. Such women are making money and their homes, generally an entire house, are nicely kept, frequently expensively fur-

nished. Several of these women allowed me to inspect the entire house. One notorious woman, against whom there is a record of several convictions, stated at the time of the interview that business was slack, she had only three patients—one a miscarriage, recovered, and about to be discharged, and two expecting to be confined. In the latter cases the child would be boarded out until such time a home could be found for it by advertising. The customary charges are $5.00 a week for board and washing and $25.00 for the confinement.

Last March a successful crusade was made against those institutions which were using the daily papers as an advertising medium to make known to the public their willingness to undertake criminal operations. As a result some thirty midwives were forbidden the use of the United States mails. In July I found some of these same women advertising in a German paper. The advertisements were immediately ordered out, but in November the same women under different names were to be found again advertising in another German paper. Such advertisements may also be found in the French and Bohemian papers. There is a "Midwives' Protective Association" in the city which exists ostensibly to furnish legal assistance to members for the collection of bad accounts, but in reality the reason for its existence is to render advice and aid in case of prosecution for violation of the law.

How widespread this evil of abortion is becoming, we can but form the vaguest conception. An official whose position affords every opportunity for his judgement to be reinforced by a wide experience, stated recently that in his opinion not less than 100,000 abortions were committed annually in New York city. Others to whom I have repeated this statement have assured me that it was a most conservative estimate. The consensus of opinion seems to be that midwives are the chief agents in procuring these abortions. Indeed, some go so far as to say that the two terms "midwife" and "abortionist" are synonymous here in New York. Nor in the consideration of the moral question involved must we lose sight of the physical ills resulting from these criminal operations. Not only is the life of the unborn child destroyed but the life of the mother is seriously jeopardized.

Statistics have been compiled showing that one-third of known criminal abortions result in the death of the mother as well. During the same period, 1895 to 1900, inclusive, there were reported at the Board of Health 389 deaths from abortion, not classified as criminal, and 359 deaths from uterine hemorrhage. While it is impossible to make any definite statement as to the number of such deaths that should be attributed to midwives who, through contributory negligence or direct unlawful interference with the progress of pregnancy, were directly or indirectly responsible for these conditions which ultimately resulted in the death of 748 women in six years, we may safely assume that criminal malpractice

should be regarded as the remote cause of death in at least two-thirds of all such cases.

Nor do midwives of this class confine their unlawful practice solely to producing abortions. Having unlimited confidence in their own powers and trading upon the credulity of the ignorant women who consult them, they do not hesitate to administer drugs, to undertake the cure of sterility (frequently with the most disastrous results), and to give advice as to the treatment of many minor ills, retarding the patient's recovery by preventing her from obtaining necessary treatment from a reputable physician. It is undoubtedly true that many a better trained foreign midwife who continues to practice midwifery here is equally guilty on these several counts. Accustomed to practicing her profession under the strictest medical and governmental supervision in her own country, her first thought upon resuming her calling here is that she is in a free country, where she is at liberty to follow her own way without let or hindrance. Unlawful demands are made upon her services, she sees others reaping the pecuniary rewards for rendering such services, and it is only a question of time until she too falls into line and stands ready to do whatever may be required of her—for a consideration.

One of the world's great social economists, John Ruskin, has laid down the axiom that "every child has a right to be well-born." If accepted, this should involve not only the preservation of the standard of health, morals and intelligence by the rigid regulation of the conditions of marriage, but also adequate provision for a child's safe entry into the world at birth, through the maintenance of a supply of skilled attendants for women in labor. Such a supply can be secured only through the operation of some method or law restricting the practice of such attendants to those who have attained a minimum required standard of efficiency. In the case of physicians a recognized standard generally prevails. Should not the midwife also be obliged to conform to a certain standard of skill and experience if she is to be allowed to take into her own keeping the lives of hundreds of mothers and babes? No child is "well-born" who starts life handicapped with a crippled limb, an accident of birth, or who must live out his days in blindness or with impaired vision, the result of neglect in infancy. No mother has received proper attention who must endure months, frequently years of suffering, caused by the *sequelae* of child-birth. Doubtless the ideal condition would be to have the entire obstetrical practice of the community in the hands of physicians. But we are face to face with a practical need and it must be met in a practical way. It is a condition that confronts us, not a theory.

I think we may safely assume that midwives have a right to exist so long as they are required and, right or no right, they will continue to exist so long as women demand their services, and women will demand their services just so long as the economic condition of the masses re-

mains as it is. Shall we have an efficient, well-trained, well-supervised body of women to meet this demand or shall we allow the present condition of chaos to go on indefinitely? The law protects the poor against improper housing conditions, against unsanitary surroundings, against unwholesome food supplies; but it makes no attempt to protect over 40,000 mothers who are annually exposed to the dangers of incompetent, ignorant, unclean midwives who attend them during confinement. The theory that the present policy of non-recognition will eventually result in the gradual disappearance of the midwife, or else in a law restricting the practice of obstetrics to the medical profession, is not tenable in the face of the enormous and ever increasing foreign population with which we have to deal. Within fourteen years the number of births reported by midwives has nearly doubled (1891, 22,770; 1905, 43,830). This increase is of course comparable with the increase in population from natural causes, from immigration, and from the extension of the confines of New York city, so that the percentage of the total number reported remains practically the same.

The midwives practicing in the city of New York have absolutely no recognized legal status under the laws of the state of New York. A provision of the sanitary code requires them to register at the Board of Health, but such registration, which should at least be evidence that the midwife is properly qualified to fulfill the duties of her calling, in reality does not guarantee that the midwife so registered is in the possession of even a modicum of intelligence, let alone any fitness, professional or otherwise, beyond what is shown by the recommendation of two physicians or a certificate from a school of midwifery. I have already commented upon the value of both these requirements.

The greatest dangers in the practice of the ignorant midwife lie in her willingness to interfere with the natural progress of labor, under the impression that she is thereby rendering assistance to the mother; in her inability to recognize conditions that make for future disease, disability or suffering; in her undertaking to conduct abnormal or difficult labors; and in her total disregard of the first principles of cleanliness. It is worthy of note that within the past five years (1901–1906) comparing the number of deaths from puerperal fevers and puerperal hemorrhage with the number of deaths of women of child-bearing age, the percentage has increased from 3.39 per cent in 1901 to 4.12 per cent in 1905. I am not prepared to say upon whose shoulders the responsibility for this increase should rest, but at least it indicates the necessity for the stricter enforcement of antiseptic precautions in the care of parturient women. Another argument frequently advanced as proof of the incompetency of the practicing midwife is the high still-birth rate that prevails here in New York. An examination of 3,635 still-birth certificates returned for the year 1905, in Manhattan, showed that approximately twenty-four

per cent were signed by midwives. Some of these certificates were signed with the attending midwife's mark, she being evidently unable to write her name. Had these midwives been intelligent, properly trained women, quick to recognize an emergency and prompt to summon medical aid, is it not reasonable to suppose that this percentage would have been materially reduced? On the other hand, the right to sign such certificates affords a cloak to the criminal midwife under which she may continue her nefarious trade. It is impossible to estimate how many of these still-births are the result of accident or disease and how many the result of criminal interference with pregnancy.

This is the problem. Are we prepared to solve it with restrictive legislation? It is by this means that the question has been met and successfully answered abroad, and it is by this same means that several of our states and localities have attempted to answer the question in this country. The weak point in all our American legislation on this subject lies in the lack of any provision looking to the enforcement of the limitations of such laws, by adequate supervision and inspection of the woman who is licensed to practice midwifery. We have seen how necessary such supervision is regarded abroad. It is rendered equally necessary by the conditions our large foreign population have created in certain parts of the city. A Bohemian midwife who had been in this country a year and a half said, when I called and inquired for her diploma, "I have been waiting eighteen months for you to come." Let it be clearly understood that the function of the midwife is to attend natural labor only and to know when it is her duty to send for medical assistance. A law specifically defining the province and duties of the midwife and providing ample punishment for any violation of the limitations prescribed by such law, and requiring absolute evidence of her professional fitness as a condition of licensing her practice, would operate as a safeguard against the usurpation of the function of the physician by the competent midwife as well as a bar to the practice of the ignorant, untrained, inefficient midwife.

In this state there is special legislation to regulate the practice of midwifery applying to Monroe county, Erie county, Niagara county and Chautauqua county. During the past week I visited Rochester, Buffalo, Lockport, Dunkirk and Syracuse for two purposes: first, to find out the practical working of the special legislation applying to these localities; second, to secure their co-operation in getting a state law through the legislature, in case that should be attempted. Everywhere I was received with the most cordial interest, and promises of hearty co-operation. The prevailing sentiment seems to be that while the law in force at present has operated toward raising the standard of efficiency amongst midwives and has successfully eliminated the ignorant and incompetent midwife, the enforcement of limitations under which the licenses are granted is

entirely neglected. In proof of the truth of this statement, I can recite the result of personal interviews with five midwives in Buffalo, intelligent and well-trained women. Three stated that they undertook the conduct of abnormal labors; two exhibited bags for inspection quite as dirty as the average bag shown by the New York midwife; and in one bag I found the usual instrument for criminal operations, the wired gum catheter. The physicians of these cities whom I interviewed are enthusiastic at the idea of a state law which will provide a uniform standard applying to all parts of the state.

In closing I desire to express my sincerest gratitude to the counsel of the County Medical Society, whose advice and assistance have been at my command throughout the entire course of this investigation, and without whose hearty co-operation much of the knowledge that I have been able to obtain upon the criminal side of the question of midwifery practice would have remained a sealed book to me; also I wish to thank the officials of the Board of Health for the courtesies they have extended to me in granting access to their records, and for valuable introductions to the heads of various institutions; also the physicians in charge of these institutions, and the other physicians who have so willingly and readily given me of their time and interest.

3. *Maternal Mortality from All Conditions Connected with Childbirth*

Grace L. Meigs

SUMMARY

In 1913 in this country at least 15,000 women, it is estimated, died from conditions caused by childbirth; about 7,000 of these died from childbed fever, a disease proved to be almost entirely preventable, and the remaining 8,000 from diseases now known to be to a great extent preventable or curable. Physicians and statisticians agree that these figures are a great underestimate.

In 1913 the death rate per 100,000 population from all conditions caused by childbirth was little lower than that from typhoid fever; this rate would be almost quadrupled if only the group of the population which can be affected, women of childbearing age, were considered.

In 1913 childbirth caused more deaths among women 15 to 44 years old than any disease except tuberculosis.

The death rate due to this cause is almost twice as high in the colored as in the white population.

Only 2 of a group of 15 important foreign countries show higher rates from this cause than the rate in the registration area of the United States. The rates of 3 countries, Sweden, Norway, and Italy, which are notably low, show that low rates for these diseases are attainable.

The death rates from childbirth and from childbed fever for the registration area of this country apparently are not falling to any great extent; during the 13 years from 1900 to 1913 they have shown no demonstrable decrease. These years have been marked by a revolution on the control of certain other preventable diseases, such as typhoid, diphtheria, and tuberculosis. During that time the typhoid rate has been cut in half, the rate from tuberculosis markedly reduced, and the rate from diptheria reduced to less than one-half. During this period there has been a decrease in the death rate from childbirth per 1,000 live births in England and Wales, Ireland, Japan, New Zealand and Switzerland.

These facts point to the need in this country and in foreign countries of higher standards of care for women at the time of childbirth.

Source: Grace L. Meigs, *Maternal Mortality from All Conditions Connected with Childbirth in the United States and Certain Other Countries*. United States Department of Labor, Children's Bureau Publication, No. 19. Washington, D.C.: Government Printing Office, 1917.

The low standards at present existing in this country result chiefly from two causes: (1) General ignorance of the dangers connected with childbirth and of the need for proper hygiene and skilled care in order to prevent them; (2) difficulty in the provision of adequate care due to special problems characteristic of this country. Such problems vary greatly in the city and in the rural districts. In the country inaccessibility of any skilled care is a chief factor.

Improvement will come about only through a general realization of the necessity for better care at childbirth. If women demand better care, physicians will provide it, medical colleges will furnish better training in obstetrics, and communities will realize the vital importance of community measures to insure good care for all classes of women.

PART 1. GENERAL DISCUSSION

Statistics Relating to Childbirth in the United States and in Certain Foreign Countries.

Introduction

For the last two decades civilized countries have been absorbed in the problem of preventing the enormous and needless waste of human life represented by their infant death rates. The importance of this problem has been felt more keenly in the last two years in the countries now at war; in these countries the efforts toward saving the lives of babies have redoubled since the war began. Side by side with this problem, another, which is only of late finding its true place, is that of the protection of the lives and health of mothers during their pregnancy and confinement. This is a question so closely bound up with that of the prevention of infant mortality that the two can not be separated.

It is now realized that a large proportion of the deaths of babies occur in the first days and weeks of life, and that these deaths can be prevented only through proper care of the mother before and at the birth of her baby. It is also realized that breast feeding through the greater part of the first year of the baby's life is the chief protection from all diseases; and that mothers are much more likely to be able to nurse their babies successfully if they receive proper care before, at and after childbirth. Moreover, in the progress of work for the prevention of infant mortality it has become ever clearer that all such work is useful only in so far as it helps the mother to care better for her baby. It must be plain, then, to what a degree the sickness or death of the mother lessens the chances of the baby for life and health.

This question has also another side. Each death at childbirth is a serious loss to the country. The women who die from this cause are lost

at the time of their greatest usefulness to the State and to their families; and they give their lives in carrying out a function which must be regarded as the most important in the world.

Questions then of the most vital interest to the whole Nation are these: How are the lives of the mothers in this country and other countries being protected? To what degree are the diseases caused by pregnancy and childbirth preventable? If preventable, how far are they being prevented in this country? Has there been the same great decrease in the last years in sickness and death from these causes as that which has marked the great campaigns against other preventable diseases such as typhoid, tuberculosis, or diphtheria? How do the conditions in the United States compare with those in other countries?

In the following report the attempt has been made to derive answers to those questions from the official records of this country and of foreign countries.

Are the diseases caused by pregnancy and confinement preventable diseases?

These diseases fall naturally into two groups, which differ considerably as to the degree to which they are preventable:

1. Childbed fever, or puerperal septicemia (an infection arising in connection with miscarriage or confinement), which is to a great degree a preventable disease.

2. All other diseases and complications caused by pregnancy and confinement, including conditions varying very much in the degree to which they can be prevented or cured.

Puerperal septicemia (childbed fever). The fact is now well known that puerperal septicemia, or childbed fever, is in reality a wound infection, similar to such an infection after an accident or an operation, and that it can be prevented by the same measures of cleanliness and asepsis which are used so universally in modern surgery to prevent infection. The proof of the nature of this disease is one of the tremendous results of the scientific discoveries which were made in the latter part of the nineteenth century.

During the early part of that century childbed fever was one of the greatest hospital scourges known. It occurred also in private practice; but in hospitals where there was great opportunity for the spreading of infection the death rate from this disease was appalling. The average death rate in hospitals in all countries was 3 to 4 per cent of all women confined; sometimes it reached 10 to 20 per cent and even over 50 per cent during short periods of epidemics. In the face of this terrific mortality many obstetrical hospitals were closed. Commissions were appointed to investigate the cause of these epidemics, and medical congresses devoted sessions to the discussion of the problem. In 1843 Oliver Wendell Holmes, and in 1847 Semmelweiss, published articles stating the theory that this fever was similar to a wound infection and

was due chiefly to the carrying of infectious material on the hands of attendants from one case to another. The same ideas had been published much earlier but had not received attention.

At the time of the publications of Holmes and Semmelweiss it was not known that the infection of wounds is caused by the action of bacteria or germs. This discovery followed the pioneer discovery of living bacteria causing fermentation, made by Pasteur about 1863, which has revolutionized all surgery and preventive medicine.

In 1867 Lister began to apply to surgery the work of Pasteur; he taught that wound infection at operation could be prevented by the destruction of bacteria through disinfection or antisepsis. Though these methods have been supplemented in later years by the better methods of absolute surgical cleanliness or asepsis, they represented at that time a great advance.

About 1875 Lister's methods began to be generally accepted and applied in hospitals to the prevention of infection at childbirth. This movement gained great support in 1879 when Pasteur proved definitely that childbed fever is caused by bacteria.

Gradually the methods of antisepsis or disinfection and later the better methods of asepsis were accepted in obstetrical hospitals; and at the same time the mortality, once so high, dropped enormously. At present the death rate from puerperal septicemia among cases delivered in hospitals is extremely low. . . .

This experience in hospitals has proved definitely that puerperal septicemia is to a very large degree preventable. One fact, however, complicates the whole question and makes it impossible to say that the disease is in all cases absolutely preventable, namely, that a very small number of cases develops even under conditions of the best hospital or private care, when every method for avoiding infection has been used. This fact has led to much controversy. In general obstetricians of the greatest experience believe that a small number of cases of infection after childbirth may develop from bacteria which were already in the body of the patient before confinement; but that in the main such cases are of mild severity and that only a few fatal cases are due to this cause. Another point which must be borne in mind is that, in a certain number of cases, women may infect themselves through improper hygiene during pregnancy or just before or at confinement. Therefore the teaching of proper hygiene is an essential part of the work for the prevention of infection.

To sum up, experience has shown that by far the major part of all serious cases of infection at childbirth may be prevented by the application of such principles of hygiene and of strict surgical cleanliness as are now established beyond question.

All other diseases caused by pregnancy and confinement: . . . A definite state-

ment such as that made above regarding the preventability of puerperal septicemia can not be made about this second group of diseases, which includes many different conditions. However, it is a fact well proved in practice that a large number of these complications can be prevented through proper hygiene and supervision during pregnancy and through skilled care at labor. Certain other complications which can not be prevented can be detected before serious harm is done, and treatment can be given which will save the mother's life. We can see this more clearly if we consider as examples two of the most important complications.

Puerperal albuminuria and convulsions, called also eclampsia, or toxemia of pregnancy, is a disease which occurs most frequently during pregnancy but may occur at or following confinement. It is a relatively frequent complication among women bearing their first children. When fully established its chief symptoms are convulsions and unconsciousness. In the early stages of the disease the symptoms are slight puffiness of the face, hands, and feet; headache; albumen in the urine; and usually a rise in blood pressure. Very often proper treatment and diet at the beginning of such early symptoms may prevent the development of the disease; but in many cases where the disease is well established before the physician is consulted, the woman and baby can not be saved by any treatment. In the prevention of deaths from this cause it is essential, therefore, that each woman, especially each woman bearing her first child, should know what she can do, by proper hygiene and diet, to prevent the disease; that she should know the meaning of these early symptoms if they arise, so that she may seek at once the advice of her doctor; and that she should have regular supervision during pregnancy, with examination of the urine at intervals.

Some obstruction to labor in the small size or abnormal shape of the pelvic canal causes many deaths of mothers included in the class "other accidents of labor" and also many stillbirths. If such difficulty is discovered before labor, proper treatment will in almost all cases insure the life of mother and child; if it is not discovered until labor has begun, or perhaps until it has continued for many hours, the danger to both is greatly increased. Every woman, therefore, should have during pregnancy—and above all during her first pregnancy—an examination in which measurements are made to enable the physician to judge whether or not there will be any obstruction to labor. A case in which a complication of this kind is found requires the greatest skill and experience in treatment but with such treatment the life and health of the mother are almost always safe.

These two examples will suffice. In the same way it could be shown, with regard to all the other complications of pregnancy and labor, that those which can not be prevented can be treated successfully in most cases if detected in time.

It can be regarded, then, as a generally accepted fact that all illness and death connected with childbearing is, to a certain, and large degree, preventable, through the application of the scientific knowledge which is now well established. The next questions are, How far are these diseases being prevented in the United States? How many deaths do they cause each year? What are the death rates from these causes, and are they decreasing or increasing? The statistics gathered by the United States Bureau of the Census have been studied for answers to these questions.

There are other equally important questions to which these figures will not give answers. In addition to the number of deaths and death rates, it is important to know how much illness is caused by the diseases of pregnancy and confinement. How many women do they disable for months or years? Undoubtedly the health of these mothers affects enormously the welfare of their children. Unfortunately such questions can not be answered; puerperal septicemia is not a reportable disease in this country as it is in many others. We can only remember that for each woman who died there are surely many who were ill for days, weeks, or months, but who finally recovered.

The following pages give a brief summary of the data, published by the United States Bureau of the Census dealing with deaths from childbirth. These are discussed in further detail in other sections of the report.

Reliability of data

The statement is frequently made that all statistics on this subject are incomplete. This is undoubtedly true with regard to the figures available in each country. A detailed discussion of the many sources of error in the statistics of the United States and of foreign countries on this subject will be found in another section. . . .

From that discussion several conclusions may be drawn:

1. Though the figures of the number of deaths from puerperal septicemia and from all other diseases connected with childbirth are certainly incomplete, yet they are reliable as far as they go; they may be accepted as a statement of the minimum number of deaths which have actually occurred as a result of these diseases.
2. All conclusions as to comparative death rates in various years and in various countries can be made only with caution and by bearing in mind the many statistical pitfalls connected with such comparison.

With a full understanding of the limitations of the figures available, it has seemed worth while to publish the following figures of the deaths in the United States due to childbirth.

Number of Deaths in the United States from Childbirth

In 1913 in the "death-registration" area of the United States 10,010 deaths were reported as due to conditions caused by pregnancy and childbirth. Of these deaths, 4,542 were reported as caused by puerperal septicemia or childbed fever.

Using the death-registration area as a basis, we are justified in estimating that in 1913 in the whole United States 15,376 deaths were due to childbirth, and 6,977 of these were due to childbed fever. As will be shown later, these figures are without doubt a gross underestimate. As it is, they are striking enough—almost 7,000 deaths in one year in this country due to childbed fever, a disease to a large degree easily preventable; and over 8,000 due to the other diseases caused by pregnancy and confinement, most of which are preventable or curable by means well known to science.

Death Rates in the United States from Childbirth

The death rate from all diseases caused by pregnancy and confinement in 1913 in the registration area was 15.8 per 100,000 population (which includes all ages and both sexes). The death rate from puerperal septicimia was 7.2.

These figures, however, mean little to us unless we compare them with the death rates from other preventable diseases. In the same year and area the typhoid rate was 17.9 per 100,000 population; the rate from diphtheria and croup 18.8. The highest death rate from any one disease was that from tuberculosis, 147.6 per 100,000 population. Any such comparison with the rates from diseases to which both sexes and all ages are liable is of course very misleading; but in spite of that fact it is interesting to note that typhoid fever, the disease against which so great an amount of effort is now directed, has a rate at present but 2 per 100,000 population higher than that from the diseases caused by pregnancy and confinement.

Death Rates per 100,000 Women.

The death rates from childbirth are approximately doubled when worked on the basis of 100,000 women. . . .

Death Rates per 100,000 Women of Childbearing Age.

Again, a much higher but a more accurate death rate from these diseases is found when the basis taken is the group which alone is affected by these diseases—women of childbearing age. When the rate is based not upon 100,000 population of both sexes and all ages but upon 100,000 women 15 to 44 years of age, the rate as ordinarily given is multiplied several times.

In 1900, the only year for which the rates can be computed, the death

rate in the registration area per 100,000 women 15 to 44 years of age from all diseases of pregnancy and confinement was 50.3; from puerperal infection, 21.6. . . . The corresponding rates for the same year per 100,000 population were 13.1 and 5.6. In this year, therefore, the rates are almost quadrupled when based on that group of the population which alone can be affected by these diseases.

Moreover, the death rates as ordinarily given per 100,000 population conceal the fact that the diseases of pregnancy and childbirth are indeed among the most important causes of death of women between 15 and 44 years of age; the actual number of deaths shows this to be the case. In 1913 in the registration area these diseases caused more deaths than any other one cause of death except tuberculosis. In that year there were, among women 15 to 44 years of age, 26,265 deaths from tuberculosis; 9,876 deaths from the diseases of pregnancy and confinement; 6,386 from heart disease; 5,741 from acute nephritis and Bright's disease; 5,065 from cancer; and 4,167 from pneumonia. Other diseases, such as typhoid, appendicitis, and the infectious diseases show far fewer deaths. . . .

Death Rates per 1,000 Live Births.

This rate, as will be shown repeatedly throughout the report . . . gives a far clearer picture of the actual risk of childbirth than do any of the rates so far considered. This rate can be given only for one year, 1910, and only for the provisional birth-registration area for that year. The rate from all diseases caused by pregnancy and confinement is 6.5, from puerperal septicemia, 2.9, and from all other diseases of pregnancy and confinement, 3.6 per 1,000 live births. That is, in this area for every 154 babies born alive one mother lost her life. . . .

Is the Death Rate from Childbirth Falling?

Has there been in the last few years any decrease in the death rates from puerperal septicemia and from other diseases caused by pregnancy and confinement? The general opinion of the medical profession and of the laity is that these death rates, and especially the rate from puerperal septicemia, are fast decreasing. The fact that hospital epidemics of puerperal septicemia are now things of the past is thought to be evidence that deaths from this disease are now rare. On the other hand, many obstetricians of wide experience believe that outside of hospitals there has been no great decrease in the death rate from puerperal septicemia.

Dr. Williams, professor of obstetrics, Johns Hopkins University, believes that there has been no great improvement in this country; Dr. Webster, professor of obstetrics, Rush Medical College, University of

Chicago, and Dr. Powell hold the same opinion; Dr. De Lee, professor of obstetrics, Northwestern University, comments on the great prevalence of puerperal septicemia in spite of our present knowledge of asepsis. Dr. Moran points out the lack of decrease in the figures as given in the census reports, as does also Dr. Davis in a recent volume. Dr. Edgar, professor of obstetrics and clinical midwifery, Cornell University Medical College, on the other hand, believes that there has been a decrease.

We need a definite answer to this question, based on a study of unassailable statistics. Unfortunately the available figures on this subject for this country and foreign countries have many possibilities of error, as will be shown in a later section.... The errors have been avoided as far as possible; those which can not be avoided must be considered in reading the following summary. Especially to be remembered is the fact that in recent years great improvement has been made in the registration of deaths from childbirth and childbed fever.

According to the evidence available, these death rates are apparently not decreasing. During the 23 years ending in 1913 in this country no definite decrease in the death rate from the diseases caused by pregnancy and confinement can be demonstrated; nor can any decrease in the death rate from puerperal septicemia be shown.

In the registration area as a whole the death rates have shown no decline in the years betweeen 1890 and 1913. The death rate from all diseases caused by pregnancy and confinement, which was 15.3 in 1890, fell to 13 in 1902, and then with annual fluctuation rose to 16 in 1911; in 1913 the rate was 15.8. The annual average for the period 1901 to 1905 was 14.2; for the period 1906 to 1910, 15.5....

The death rate from all diseases caused by pregnancy and confinement for the group of eight States which have been included in the death-registration area from 1890 to 1913 also has shown no decrease during the course of these 23 years. There was a slight fall in the rate for the year 1900 as compared with that for the year 1890, followed by a slight rise.... In 1890 the rate was 14.1 per 100,000 population; in 1900, 12.6; in 1913 it was 14.3.

The death rates for a second group of States (those included in the death-registration area since 1900) show between 1900 and 1913 a slight increase, from 12.9 to 14.9, with the high point 15.5 in 1911....

The death rates from puerperal septicemia or childbed fever during these years in each group of States have run parallel with those from the whole group of diseases connected with childbirth; they, too, have shown practically no change in 13 years.

It is probable that the improvement in reporting deaths from childbirth may account for the apparent rise in the rates since 1900; it may also perhaps conceal a slight improvement in actual conditions since that time; but it is safe to say that any marked decrease in the actual death

rate from childbirth during the last 13 years could not have been masked by this error.

In these years what has been the change in the death rates from other preventable diseases? These death rates tell a very different story from that of the rates from childbirth. They give a bare outline of the remarkable achievements of modern medicine in the prevention of certain diseases.

Between 1890 and 1913 the death rate from typhoid fever in the death-registration area fell from 46.3 to 17.9; that from diphtheria and croup from 97.8 to 18.8; from tuberculosis from 252 to 147.6; from pneumonia from 186.9 to 132.4; from diarrhea and enteritis under 2 years from 139.1 to 75.2. . . .

If we consider only the 13 years since 1900, for which we have annual reports, the changes are just as startling. In that time the death rate from typhoid fever has been cut in half; that from diphtheria and croup has dropped to less than half; those from tuberculosis and pneumonia have both shown a marked fall. . . .

Death Rates from Childbirth in Urban and Rural Districts

Besides the question applying to the death rates of the country as a whole, there are further questions which it would be interesting to answer from the data given by official figures. Is the rate higher in the cities than in the rural districts? Does a comparison of the rates of different sections of the country reveal any significant facts? Is there any difference in rate among different groups of the population?

No figures, unfortunately, are available for the death rates from these diseases in what is generally understood as the rural portion of this country; that is, among the population scattered in districts outside of even the smallest towns and cities. In view of the fact that standards of obstetrical and prenatal care differ so widely in these rural districts from those in large cities a comparison of the rates would have been extremely significant.

The death rates for the group of cities of 8,000 or more inhabitants in the registration States have been studied, as contrasted with the death rates of the smaller cities, towns, and rural districts classed together. The rates in each year are higher for the larger cities of the registration States than for the smaller cities and rural districts. . . . Part of this difference may be due to greater incompleteness of the returns from the second group. Further than this, many factors may be involved in the higher rate in the larger cities. While some of the larger cities afford better provision for obstetrical and prenatal care than do the smaller cities and rural districts, this is not true of all; moreover, the larger cities probably show a much higher rate among the less favored than among

the more favored groups of their inhabitants. Overcrowding, overwork, low incomes, ignorance of the need for good obstetrical care and how it can be obtained may all play their part in producing this high rate in the larger cities.

The figures do not show a decrease in the death rates from childbirth in the larger cities in recent years. The death rates of the whole group of cities of 8,000 or more inhabitants in the registration States for the years 1900 to 1913 . . . show no decline. The rate in 1900 was 14.9; in 1913, 17.2.

The rates from childbirth for the same period in a group of 7 large cities have been studied. . . .

The rates for New York City alone show a definite and steady decline; in 1905 the rate per 100,000 was 20.3; in 1913, 14.1.

The rates of Boston, Buffalo, Detroit, Jersey City, and Washington show wide annual fluctuation, but no general tendency to increase or decrease. The rate of Newark, on the other hand, shows an increase.

Death Rates from Childbirth in Different States

The death rates of only 11 States (including the District of Columbia) can be studied through a period of time (1900 to 1913) long enough to justify any conclusions. These States, unfortunately, do not represent any widely different sections of the country, as they include only the New England States, two Middle Atlantic States (New York and New Jersey), the District of Columbia, and two North Central States (Indiana and Michigan). The western and southern sections of the country are unrepresented.

Though the rates for each State vary considerably from year to year, it will be noted that certain States show high average rates; among these are the District of Columbia, Michigan, and Rhode Island, whose rates are 17.6, 17.1, and 16.8, respectively. . . . Other States show comparatively low average rates; for example, New Hampshire (11.2) and Maine (11.8). It seems premature at this time to draw any conclusions as to the cause of these differences in rates in different States. When the rates are available for all sections of the country, a comparison of rates for different large sections presenting similar problems will be very useful.

Death Rates from Childbirth of White and Colored Population

No facts brought out in this study are as striking as the difference in rates from childbirth of the white and colored population of the death-registration area. In some cases the rates for the colored population are almost double those for the white. . . . In 1913 the death rate from all

diseases caused by pregnancy and confinement was 15.2 per 100,000 white population and 26.1 per 100,000 colored. In the same year the rate from puerperal septicemia was 6.9 for the white population and 11.5 for the colored. A similar relation is shown by the rates for each year from 1910 to 1913. Although the rates can be given only for four years, and are based on small figures, yet they show differences so marked that they picture without doubt a very great difference in standards of care at childbirth in these two groups. When all the Southern States are included in the death-registration area the magnitude of this problem undoubtedly will be shown by the death rates from childbirth in these States. At present but a small percentage of the colored population of the United States is represented by the figures available.

Comparison of the Average Death Rates from Childbirth in Certain Foreign Countries and in the United States

Are the death rates from the diseases in the death-registration area of the United States higher or lower than those in other civilized countries? Have these rates in other countries been falling or rising in the last 13 years, while the rates of this country have been apparently stationary? These questions, like all those of comparative international statistics, are of immense interest, but they involve many difficulties and sources of error. . . .

In order to make possible a comparison of the death rates from these causes for 15 foreign countries with those for the United States, an average rate has been computed for the years 1900 to 1910 for each of the countries, using the same method as that in use in the United States. When the 16 countries studied are arranged in order, with the one having the lowest rate first, the death-registration area of the United States stands fourteenth on the list. . . . Only two countries, Switzerland and Spain, have higher rates; many of the countries, however, show rates differing but little from that of the United States. Markedly low rates are those of Sweden (6), Norway (7.8), and Italy (8.9); a strikingly high rate is that of Spain (19.6).

The death rate from childbirth per 1,000 live births is not available for the death-registration area of the United States, but can be given only for the small number of States and cities included in the provisional birth-registration area and for one year, 1910. . . . This rate, 6.5, is considerably higher than that for 1910 of any of the countries studied. When the average rates for a number of years of the 15 countries are reckoned per 1,000 live births and arranged in order, it will be seen that the same group of countries—Sweden, Italy, and Norway—shows the lowest rates. . . . Spain . . . shows the rate which is next to the highest, while Belgium now has the highest rate. For a comparative study of the rates of these

countries the rates per 1,000 live births give undoubtedly the clearest picture of the actual conditions.

These rates show a wide variation. While in Sweden but one mother is lost for every 430 babies born alive, in Belgium one mother dies for every 172 babies, and in Spain one for every 175 babies born alive. The rates in Belgium and Spain are two and a half times as high as the rate in Sweden.

Far more significant than a comparison of actual death rates of various countries is a comparison of the changes which have occurred in these death rates in each country in recent years. England and Wales, Ireland, Japan, New Zealand, and Switzerland have shown a decrease in the death rate per 1,000 live births from all diseases caused by pregnancy and confinement; but, in this group, only in England and Wales and in Ireland has the death rate from puerperal septicemia decreased; in the other three countries this rate has remained practically the same, though the total rate has decreased.

In Australia, Belgium, Hungary, Italy, Norway, Prussia, Spain, and Sweden both the rate from childbirth and that from puerperal septicemia remained almost stationary during the periods studied.

The total rate for Scotland shows a definite increase, though the rate from puerperal septicemia has decreased. . . .

Conclusions

In the foregoing pages the attempt has been made to draw, from available statistics, answers to certain important and urgent questions relating to the hazards of childbirth in this country and in other countries. It has been shown that a large number of women die year after year in this country from childbed fever, a disease proved over 40 years ago to be almost entirely preventable; and that a still larger number die from other conditions connected with childbirth which are known to be to a large degree preventable or curable. The proportionately small number of women lost from these causes in certain foreign countries demonstrates the needlessness of the greater part of our losses. There is no evidence, moreover, of any great advance made during the last 13 years in this country in the prevention of disease and death due to childbirth, though the same period has been marked by a notable decrease in the death rates of certain other diseases which have been proved preventable.

What is the cause of these conditions in this country? At the root of the matter, apparently, lie two chief causes. First, general ignorance of the dangers connected with childbirth and the need of skilled care and proper hygiene in order to prevent them; second, such difficulties related to the provision of proper obstetrical care as are characteristic of conditions in this country.

A general realization of certain of the fundamental facts related to the bearing of children has only begun; this function has always been looked upon with a mixture of ignorance and fatalism. The hazards to health and life connected with childbirth have been either ignored or accepted as unavoidable accidents. By most people childbirth is regarded as an entirely normal process, and, happily, in the great majority of cases this is true. But the figures given in this report show that it is not true of all. Each year there is a vast number of normal deliveries, and among them the relatively small but absolutely very large number of complicated cases is lost sight of. On the other hand, most people regard such illness and deaths as do occur as unpreventable. Only very gradually and incompletely are women beginning to realize the simple facts that certain accidents and complications occur in a definite percentage of cases of childbirth, but that almost always these may be avoided or cured if women exercise the proper hygiene during pregnancy, secure proper supervision during that time, and have skilled attendance at labor. Like other essentials of hygiene and preventive medicine these principles are at last becoming public property instead of being the exclusive possession of physicians. But in this case progress has been very slow. Knowledge of the need for good care at childbirth is essential; the lack of such knowledge and of a demand for this care has been, probably, the chief factor in producing the present indifference to this phase of preventive medicine.

The husbands of women bearing children do not realize that money paid for skilled service at childbirth is one of the most necessary family expenditures; hence, obstetrics has become one of the worst paid though one of the most taxing branches of medicine. . . . Naturally enough, the lack of interest of physicians in obstetrics is partly due to this fact. No doubt another reason why many able physicians dislike this branch of practice is the fact that they feel strongly the responsibility assumed in the care of women at childbirth; yet they are infrequently called upon to take this responsibility in the face of conditions which they can not control and which threaten the safety of their patients. A conscientious physician does not willingly undertake the conduct of a difficult case of labor outside a hospital and without skilled assistance; but frequently he must do so, either because there is no hospital or trained nurse available, or because the patient and her family are unable or unwilling to pay for the needed help. The physician either must give up the case to an attendant who is less skillful and careful than himself or must take the risk that puerperal septicemia or some other complication may occur. If either follows he has the blame. Altogether a physician has little incentive to specialize and acquire great skill in this branch.

Necessarily the same apparent indifference to the importance of obstetrics is reflected in the courses of many medical colleges. Dr. Williams

pointed out in 1911 that in the majority of medical colleges in the United States instruction in this subject was grossly neglected; that graduates from these colleges beginning their practice were totally unprepared to manage any but absolutely normal cases of confinement, and that they were untrained in the practice of the principles of asepsis as applied to this branch. Other papers and discussions in the Transactions of the American Association for the Study and Prevention of Infant Mortality have emphasized the same facts. In the five years since the article of Williams was written some improvement in these conditions has undoubtedly taken place, as would be expected in connection with the present remarkable tendency toward the raising of standards of medical education in the United States. However, there is no question that further improvement is greatly needed.

Communities are still to a great extent indifferent to or ignorant of the number of lives of women lost yearly from childbirth; many communities which are proud of their low typhoid or diphtheria rates ignore their high rates from childbed fever. Communities are only beginning to realize that among their chief concerns is the protection of the babies born within their limits, and necessarily also of the mothers of those babies before and at confinement.

The second fundamental cause of the high death rates from childbirth in this country previously spoken of—that is, the difficulty of obtaining adequate care—is seen to depend to a large extent on the first, the general ignorance of need for good care. As women, their husbands, physicians, and communities realize the absolute need of skilled care for the prevention of needless deaths from childbirth, methods for providing such care will be developed. In this development special problems will have to be solved in each type of community, and in each section of the country—North, South, East, and West. These problems are different from those of foreign countries. While the methods being employed in such countries for reducing the maternal death rate may be suggestive, special methods adapted to the conditions in this country will probably have to be worked out. Of the greatest value, however, as examples, are pieces of work such as that now being carried on in England and other European countries for maternal and infant welfare, that of the New Zealand Society for the Health of Women and Children, the work of the Victorian Order of Nurses of Canada, and the mayor of the little French town of Villiers-le-duc.

Certain typical problems, characteristic of especial types of communities in this country, may be outlined briefly. In many of the larger cities excellent prenatal and obstetrical care can be obtained by those who can pay considerable sums for it and who realize its importance sufficiently to be willing to do so. In many cities, also, much progress has been made in the provision, through obstetrical clinics and hospitals,

of good prenatal and obstetrical care, free or at low cost, for those who otherwise could not afford it. Yet even in a city well supplied with such clinics the number of women reached is relatively small in comparison with the total number of women who bear their children without adequate care during pregnancy and labor. In many large cities, especially those with a large percentage of foreign or of colored population, the untrained midwife is a much-discussed problem. It is well known, moreover, that women of moderate means, who represent a very large proportion of women bearing children, have, in most modern cities, received least benefit from improvements in standards of prenatal and obstetrical care. In working out plans for decreasing the death rate from childbirth in large cities the interests of this group can not be ignored. The problem must be considered as one which must be solved for all classes in a community; it must be realized that it is a problem of the greatest importance to the community as a whole. A very hopeful tendency is the one shown already in some cities, to look upon such service not as a charity but as a concern of the municipality as truly as the protection of its homes from fire and burglary or its milk and water supply from contamination.

In rural districts the problems are essentially different. In many such districts, especially in the North and West, where pioneer conditions still prevail, the question is not one of good or bad obstetrical care but of the inaccessibility of any care at all at this time. Many women bear their children with no attendant other than the husband, a relative, or a neighbor. The nearest physician may be many miles away, the nearest hospital much farther. The expense of calling a physician must necessarily be great, and usually is not considered justifiable. These women have of course no care during pregnancy; if complications develop they are unforeseen, and help is not available. As help in household tasks is usually unprocurable, many women must take up their work much sooner than they should. It may be urged that in practice it would be quite impossible for women living under rural conditions to be provided with such skilled supervision during pregnancy and such care at and after confinement as are now considered ideal. It certainly is not true, however, that a feasible community plan could not be worked out, if the interest of the community demanded it. Such a plan would necessarily recognize two main problems: (1) The best practical care of normal cases and (2) the detection of abnormal cases and their care.

A unit plan for a rural county would perhaps include:

1. A rural nursing service, centering at the county seat, with nurses especially equipped to discern the danger signs of pregnancy. The establishment of such a service would undoubtedly be the most economical first step in creating the network of agencies which will assure proper care for both normal and

abnormal cases. In the rural counties in the United States which already have established nurses, the growth of this work will be watched with the greatest interest.

2. An accessible county center for maternal and infant welfare at which mothers may obtain simple information as to the proper care of themselves during pregnancy as well as of their babies.
3. A county maternity hospital, or beds in a general hospital, for the proper care of abnormal cases and for the care of normal cases when it is convenient for the women to leave their homes for confinement. Such a hospital necessarily would be accessible to all parts of the county.
4. Skilled attendance at confinement obtainable by each woman in the county.

As examples have been chosen the special problems in large cities and in pioneer rural districts. Other types of communities in this country present some of the same problems or others just as urgent. In each community, large or small, the essential problem is the same—how to bring about a general realization of the need for adequate care for each woman at childbirth, and how to secure such care.

This report attempts to open for lay discussion and medical study the subject of the preventable loss of life caused by childbirth in this country. Greater interest in the subject surely will lead to the development of new and successful methods for the prevention of these needless deaths.

4. *Report on the Midwife Survey in Texas, January 2, 1925*

Malone Duggan, M.D.,
State Health Officer,
Capitol Station,
Austin, Texas.

Dear Sir:

Attached hereto is the report on the survey of the midwife situation in Texas.

The activities were carried on in a comparatively small number of counties, however, it is believed that the report gives a fair cross-section of conditions in the eastern and southern parts of the state. While the survey does not include counties in the northwestern and western part of the state, information has been secured showing that comparatively few midwives are to be found in those sections; sections with a Mexican population along the Rio Grande east of El Paso, being an exception.

The conclusions, based on the survey, and on information gained by contact and correspondence during the past sixteen months, are:

1. That the midwives have practiced without restraint and have practically ignored state laws.
2. That the midwives have no training, not even in the simplest rudiments of surgical cleanliness.
3. That many of the midwives are not capable of being trained.
4. That many deaths and much disability both of mothers and babies, are directly traceable to the lack of proper care.
5. That despite the above enumerated conclusions, the midwife is still a necessity in some communities.

To assist in correcting existing conditions, the following recommendations are made:

1. That birth registration and other existing laws be rigidly enforced.
2. (a) That midwives be licensed by a board, composed of a representative of the State Board of Health, a representative of the State Board of Medical Examiners, and the local health officer (county or city).
   (b) That the license be granted for a period of one year only, and that no

Source: "Report on the Midwife Survey in Texas," Bureau of Child Hygiene, Texas State Board of Health, 1924. Manuscript in the possession of the Texas State Board of Health.

license be renewed without re-examination, and that the examination include a full physical examination, the Wassermann negative being a requirement. (c) That the licensed midwives be given suitable training, and that the standard required for licensure be raised from year to year.

It is realized that the survey of the midwife situation is not complete, however, it is believed that the information at hand should arouse all thinking people to the dire need of remedial action without delay.

Acknowledgment is made to the American Child Health Association for the very valuable cooperation given. Dr. Helen Moore of the American Child Health Association gave many valuable suggestions, and with her assistant carried on most efficient work in Jefferson, Victoria and Smith counties.

Respectfully submitted,
H. Garst, M.D.,
Director, Bureau of Child Hygiene

REPORT ON MIDWIFE WORK
BUREAU OF CHILD HYGIENE
STATE BOARD OF HEALTH
AUSTIN, TEXAS

In presenting this report I wish to call to the attention of the reader that some of the figures given might not be statistically accurate, due to the fact that a great deal of the information herein has been obtained from the midwives themselves, and because so many of them are illiterate and unable to keep any records of their work, and as a rule their memories are very limited, there might be some variation in the actual number of births attended, stillbirths, etc. However, I have endeavored to verify the figures so far as possible in different ways, such as by having them name the mothers they have attended, and by actual contact with the patients themselves.

This report does not in any way claim to cover the midwife situation in Texas. Only fifteen of the two hundred and fifty-six counties were surveyed, but the figures from these fifteen counties will give one a general idea of the existing conditions in some of the others.

The Bureau of Child Hygiene, State Board of Health, has long felt the need of some work being done in this field. The problem has been brought to its attention in numerous ways, through birth reports, doctors, reports from Public Health Nurses, from individuals throughout the state and from midwives themselves. The Bureau decided to begin an investigation of the situation in order to be able to intelligently offer a solution to the problem. This investigation was begun in May 1924 and consisted not only of a general survey of the counties visited, but also organization of classes of instruction for the midwives in regards to their work. In these classes they were taught general cleanliness and

simple nursing procedures, no attempt was made to teach them obstetrics, rather emphasis was laid on things they must not do and the necessity of calling physicians in all cases possible. Only six counties were covered in this manner, and in nine others the work was less intensive.

When this survey was begun, we had on file names of nine hundred sixty-three women who practiced in this state as midwives. These names had been secured from birth registration records, doctors, nurses and private citizens. On December 1st, 1924, the number of names had increased to two thousand and three. I feel reasonably sure that if a survey were made of the whole state we would have approximately four thousand midwives.

The 1907 Medical Practice Act provides that any one desiring to practice obstetrics alone, must pass a satisfactory examination in obstetrics. This examination to be held yearly by the State Board of Medical Examiners, and those who successfully pass the examination will upon payment of $5.00 receive license to practice as obstetricians.

This is the only law we have as yet that could be construed as applying to midwives. During the seventeen years since this bill was enacted approximately fifteen or twenty licenses have been issued according to information given by said Board of Examiners. During the survey none of the licensed midwives were found, and the report submitted does not include any licensed or trained obstetrician.

I wish it were possible to picture to the reader of this report the usual class of women practicing as midwives in the counties where the survey has been made. Illiterate, usually dirty and in rags, gesticulating, oftentimes not able to talk or understand the English language, superstitious and suspicious, often with the only knowledge of obstetrics and nursing as handed down to them by their mothers who usually had been midwives themselves, and inherited customs and beliefs as to the practice of their work which is seldom, if ever in accord with modern science. That is the picture they present to one at first. Added to this is a fear that the information asked for would be used as a basis for prosecution later. It does not, however, take one long to find out that the great majority of them truly desire to learn how to serve their people well.

The midwives among the colored people are great imitators and take much pride in imitating the methods demonstrated to them by "white folks." But without supervision it is difficult to determine the extent of their conception of the demonstrations given, and the execution of the teachings in the homes.

The Mexican midwife is more difficult to manage. Her ideas and traditions seem more fixed. She is more highstrung and more suspicious of the Americans. A very common occurrence on a second visit to a

Mexican midwife is to find both midwife and house gone—nothing left to tell the tale except the vacant lot.

A great number of the American midwives belong to some religious sect which forbids them to employ medical aid. They are rather secretive about their work and consequently it has been rather difficult to secure much information as to their activities as midwives. Other white midwives were found among the Germans and Bohemians.

SMITH COUNTY	
No. of midwives located	114
Average Age	53.81
Nationality:	
White	12
Colored	112
Literate	37
Illiterate	77
No. of births attended by midwives from January to October, 1924	307
Nationality of cases attended:	
White	31
Colored	276
Stillbirths attended by midwives	26
No. of births registered by midwives	16
No. of births registered during same time by doctors	410
Stillbirths reported	7
No. of cases to which physician was called by midwives	36
No. of midwives having used prophylactic drops in babies' eyes	16
No. of classes of instruction given	44
No. of Wassermann tests made	33
No. positive	6
Anti-complimentary	15

This is a very prosperous county with several concrete highways leading through it. No part of the county could be said to be impassable at any time of the year, because of these unusually good roads. Still as figures show, midwives have attended more than two-thirds of the births in the county. These figures were obtained from the Bureau of Vital Statistics as registered by physicians and individual information secured from midwives. All physicians interviewed, with the exception of one, expressed as their opinion that midwives were as yet a necessary evil,

but did not believe the situation in any way such as to warrant any consideration on their part. "We need midwives," they said, "but do not consider them a problem."

Most of the midwives in this county were colored, and the majority of births attended by them were among the colored people. They were almost without exception eager to attend classes of instruction, and one could see a decided change in their personal appearance after having attended a few lectures and demonstrations. If a midwife attended the first class dirty and untidy, I was sure to find her at our next meeting in clean starched dress and face as shiny and clean as if it had been scrubbed with sapolio. A midwife who was not clean said she felt "unworthy" to be among clean people, and in our classes we tried to make them feel that they were absolutely unworthy to go out and wait on a "brand new baby" without being spotlessly clean herself, and having the knowledge of how to keep the mother and little baby clean.

In this county Dr. Helen Moore with the American Child Health Association, demonstrated what she—with her years of experience in this work—considered the best method of organizing, teaching and grading midwives. She was assisted in this work by a colored nurse also with the American Child Health Association. Unfortunately her time was limited and no course of instruction was carried on to a finish.

CAMERON COUNTY	
Midwives located	57
Average age	54.26
Born in United States	22
Born in Mexico	35
Nationality:	
American	2
Mexican	55
Language spoken:	
English	3
Spanish	54
Literate	8
Illiterate	49
No. of births attended by midwives from January 1st to December 1st, 1924	616
No. of these births registered	361
Stillbirths attended by midwives	14
No. of births registered by physicians during same time	230
Stillbirths reported	7

No. of cases to which physicians were called by midwives	40
No. of midwives using prophylactic drops in babies' eyes	32
Wassermann tests made	30
Positive reaction	4
Negative	26
No. of midwives examined by physician	22
Found with very poor vision	4
Blind in one eye	2
Completely blind in both eyes	2
Suspected tuberculosis	1

The poorer class of Mexican people almost invariably employ a midwife at time of confinement. Their manner of living is extremely primitive, and usually they do not call in a physician until all their own and neighbors' home remedies have been exhausted without results, and when they do call in a doctor, they have absolutely no ethical sense, calling in two or three or more doctors at different times, meanwhile, also using their own "quacks" and then if the patient dies it is not unusual to hear a member of the family say "we called in Dr. Blank and he gave her a dose of strychnine (or something else) so she died."

It is hard to determine the mortality rate among these people, as so many children and adults are buried without death certificates. In this county a history was secured of each midwife as to the number of deaths in her own family. These histories brought forth the following figures:

No. of children 57 midwives have given birth to	304
No. living today	136
No. died during infancy	95

All these midwives had with three exceptions, themselves used midwives at the time of their confinements.

A great many of the infants are said to have died from Tetanus infection probably due to improper handling of the cord during the first few days of the infant's life.

One case was brought to my attention while making the survey. The history of the case was this: Mother delivered by midwife. Doctor called in by land owner's wife on the fifth day because she had found the baby having convulsions and in apparently bad condition. Doctor found baby with badly infected cord, free pus around umbilicus. In spite of the doctor's effort to save the baby's life it died on the seventh day. The

cause of death apparently being septic infection. I say "apparently" because the doctor was not called on to sign death certificate, and so far as is known the baby was buried without such being signed. This particular midwife was said to have had several deaths occur among the new born infants she had attended, each with similar symptoms.

Other physicians informed me that several cases of Tetanus infection of the babies' cords, where midwives had attended the births, had been brought to their attention. And unfortunately before a doctor is called in, the condition is usually so far advanced that nothing can be done to save the baby's life. The uninstructed midwife does not know the necessity of handling the cord with aseptic precautions.

If we only could teach these women a few fundamental principles of cleanliness and avoid perhaps a few of these deaths, would it not be worthwhile?

There are undoubtedly a great many more midwives in this county. The time spent here was limited and consequently all parts of the county were not reached. In this part of the state the roads, except the highways, are almost impassable during the rainy season, hence the midwife seems to be in her community almost indispensable.

Two midwives were found here who were completely blind, having taken up midwifery after losing their sight. They said they had been "endowed with Divine power," and when asked what they would do in case the mother should have a hemorrhage, they said, "Providence always looks after that."

UVALDE COUNTY

No. Midwives located	28
Average age	60.28
Nationality:	
Mexican	23
American	2
Colored	3
Language spoken:	
Spanish	23
English	5
Literate	6
Illiterate	22
Births attended by midwives from January to June, 1924	61
Stillbirths attended by midwives	11
No. of births registered by midwives	0
No. of midwives using prophylactic drops in babies' eyes	0

No. of births registered by doctors during same time	178
Stillbirths reported	2
No. of cases to which doctors were called by midwives	3
Wassermann tests made	10
Positive reaction	6
Negative	4
No. midwives born in United States	10

The midwife activities in this county are confined almost entirely to the Mexican people. Here, as customary among Mexican women, a doctor is seldom called except as a last resort. One midwife in this county had attended eight births, five of which were stillborn. No doctor had been called to any of these cases.

HARRISON COUNTY

Histories obtained from seventy-two midwives, consequently record can be given only for that number.

No. midwives located	119
Average age	50.54
Nationality	
American	3
Colored	116
Literate	18
Illiterate	101
No. births attended by midwives from January to July, 1924	266
Nationality of cases attended:	
White	28
Colored	198
No. of births registered by midwives	116
No. of stillbirths attended by midwives	22
No. of births registered by physicians during same time	147
Stillbirths reported	3
No. of cases to which physician has been called by midwives during that time	28
No. of midwives using prophylactic drops in babies' eyes	12
No. of midwives who received physicial examination	18
Defective vision	8
Wasserman tests made	18

Negative	12
Positive syphilitic reaction	8
BASTROP COUNTY	
No. of midwives located	103
Average age	56.17
Nationality:	
American	9
Mexican	8
Colored	86
Literate	25
Illiterate	78
Record of work done by 54 midwives from January to August 1924:	
No. of births attended	266
Nationality of cases attended:	
White	53
Colored	213
No. of stillbirths attended by midwives	8
No. of births registered by midwives	47
No. of births registered by physicians during same time	279
Stillbirths reported	6
No. of cases to which doctors were called by midwives	17
No. of Wassermann tests made	42
No. of positive Wassermann reaction	4
Negative Wassermann reaction	36
Anti-complimentary	2

When attending one of the classes in this county I said to one of the midwives who had arrived unusually early (they have a habit of being an hour or so late), "Aunt Susie, you are here on time today, is it not just as easy to start an hour earlier, and not miss so much of the instruction?" "Yas'm, yas'm I left home yesterday morning and stayed over with some friends last night in order to get here on time today." Later found out she had walked fourteen miles to attend class.

BRAZORIA COUNTY	
No. of midwives located	54
Average age	54.39
Nationality—All Colored	

Births attended by midwives from January 1st to October 1st, 1924	154
Stillbirths attended by midwives	2
No. cases to which physician has been called by midwives	11
No. of midwives using prophylactic drops in babies' eyes	0
No. of births registered by midwives	1
No. of births registered by doctors during same time	64
No. of hours of instruction given to midwives.	40
Literate	16
Illiterate	38
Wassermanns taken	30
Negative	19
Positive Syphilis	11

I would like to call attention to the comparatively large percentage of births attended by midwives in this county. Also to the unusually high percentage of syphilitics among them. Ten of the eleven with the positive reaction of syphilis are now receiving treatment which has been supplied by the State Board of Health.

One of the midwives practicing in this county has been suffering with a facial affliction for several years. Practically three fourths of her face has sloughed away and is at present time an open cavity, still freely discharging. She had at one time received treatment at John Sealy Hospital, and has also been advised by a local doctor to discontinue her practice as midwife, but she is still merrily going on. Her parents had twenty-one children born to them, only four are now living. She herself has given birth to thirteen children, seven are alive today. . . .

Answers as given by mothers when asked why they employed doctors instead of midwives at time of their confinements.

WHY DOCTORS?

1. Had doctor because I was young and wanted best care.
2. Wanted doctor because my mother advised me to have one if I wanted best care.
3. Had doctor because health was bad.
4. Husband believed in a doctor more than a midwife. He was just raised up that way.
5. Had doctor because I wanted doctor.
6. Had doctor because I could not "birth" my first child.

7. Had a doctor because young and knew no better.
8. Had doctor because always had a hard time.
9. Had doctor, didn't know any midwife.
10. Doctor more experienced. Granny goes mostly by guess, sometimes all wrong.
11. Lots of times wash and iron for doctor—paid bill that way.
12. Doctor was near and I just wanted him.
13. Had doctor because I know midwives are uneducated and dangerous.
14. Doctor more careful with baby's eyes.
15. Doctor cares for baby's cord better.
16. Lives safer in hands of doctor.

Answers as given by mothers when asked why they employed midwives instead of doctors at time of their confinements.

WHY MIDWIFE?

1. Had midwife because doctor usually want cash and midwife will wait.
2. Always preferred midwife because the midwife is a woman and will be more help than doctor.
3. Had midwife because I lived so far in the country and doctors would charge so much for the trip.
4. Had midwife because I can get them so much cheaper than a doctor. They take more pains with you too.
5. Doctor was too far away so I got a midwife.
6. Had midwife because I am used to women and not strange men like doctors.
7. Had midwife because I like women better.
8. Had midwife because I did not need a doctor.
9. Had midwife because I had never used doctors and did not know their ways.
10. Had midwife because I preferred a midwife to a doctor.
11. Had midwife because she was there and just rather have a woman. Can keep her with me longer.
12. Did not want a doctor.
13. Way out in the country doctors charge too much.
14. Just rather have a granny.
15. Never had time to get doctor. Baby comes so fast.
16. Mother is a granny that's why I like grannies.
17. Had a midwife because she was good as a doctor. Does what doctor does.
18. Taught to have midwife by mother.

19. Mother was a midwife and I liked one. Was my request to have one.
20. Ma wanted me to have midwife.
21. Used old granny because roads are rough and doctors won't travel.
22. Had midwife because I believe she is as good as a doctor.
23. Just rather have a midwife than a doctor.
24. So far from town, had to have midwife. All we colored folks need.
25. We stay so far from town, can't have doctor, but I know it is always best to have a doctor.
26. I just thought midwife would do as well as a doctor.
27. Wasn't any doctor round close, so I just had a midwife.
28. Didn't think it necessary to have a doctor.
29. Had a midwife because I always had an easy time. Never in labor more than one hour.
30. Had midwife but think it always best to have a doctor.
31. Had a midwife because I could not do any better.
32. Had a midwife because I got more service out of her.
33. Had midwife because she lived nearer. Had doctor once and got along better.
34. I always had a midwife. I don't believe I would like a doctor.
35. Didn't need a doctor. Had no trouble.
36. Just rather have a midwife. Get along better.
37. I never knew anything else but a midwife.
38. Had a midwife because I just naturally like one.
39. Well—I didn't think I needed a doctor.
40. She was closer and I was hurting.
41. Had doctor first time, so much trouble, thought I would try something else.
42. Just because I got in a tight. No phone close by. Doctor would ride all day to get here.
43. Don't know. Guess I just didn't have sense enough to have doctor.
44. Midwife does more for you, gives tea etc., and helps with her hands.
45. Had midwife just because I like women folks.
46. Got in a tight. Had not time to get doctor—Granny across the creek.
47. Molly was closer and doctor higher. Did my washing and charged only $5.00. Really worth more.
48. Heap of folks thinks midwives more particular. Guess just handed down from slavery time.
49. Had doctor once, got down with malaria fever, so I never would have him again. Granny helps in your misery.
50. I don't know. Rather have women. Never had doctor.
51. As soon have one as the other. Doctor charge more.

52. Had midwife because so much cheaper. Three and one half days $7.50, just as good as a doctor.
53. Just liked Aunt Ellen better. Nursed me plumb good all the way through.
54. We folks always do have midwives.
55. Cheap, and some of them take so much care of you.
56. Had midwife because everybody else had them around here.
57. It's cheaper on husband to have midwife.
58. Had midwife because it is a custom among Mexicans. Don't like men.
59. Had midwife because ashamed to have a man at that time.
60. Had midwife because could get her for seventy-five cents, doctor cost $15.00.
61. Had midwife because customary. Don't like man doctor at that time, would have him for operation.
62. Had midwife because very poor.
63. Waited on myself.
64. Had midwife, never thought of doctor.
65. Had midwife, not doctors around.
66. Had midwife because not sick enough to have doctor.
67. Had midwife because not sick and never afraid.
68. Had midwife because lived on ranch, could not get doctor.
69. Had midwife because afraid of doctor. Called him only when real sick.
70. Had midwife because I owe the doctor and ashamed to call him.
71. Believe midwife knows the case better than doctor.

These answers were given by American, Mexican and colored mothers.

FORMS OF TREATMENTS USED BY MIDWIVES

To Increase Labor Pains

1. Alusema (Lavender flowers) made into chocolate.
2. Alusema, cinnamon, peppermint, made into a tea.
3. Rosewater—one tablespoonful given every hour.
4. Golondrina tea, Spearmint tea.
5. Teaspoonful of olive oil with salt.
6. Lavender tea and castor oil.
7. Tie rope around waist line, tighten it as labor progresses.
8. Buttermilk.
9. Red onion.

10. Wasp nest and dirt dauber tea.
11. Gun powder.

Stop Hemorrhage

1. Principal treatment used by Mexican midwives is to apply tourniquet around lower extremities above knees, and around arms above elbows.
2. Take a piece of pottery, grind up with flour tuberose, make into tea to take internally.
3. Give ether for patient to inhale.
4. Loosen abdominal binder, apply tourniquet around knees.
5. Massage abdomen with garlic and hot oil.
6. Hot applications to abdomen.
7. Sugar and soot introduced into the Birth Canal.

To Stop After Pains

1. Repeated drinks of Mescal (Mescal is made from Maguey.)
2. Pepper tea with few drops of ether to drink.
3. Sugar cane, broiled.
4. Massage abdomen with ground garlic and hot oil.
5. Axe placed under bed, unknown to patient.

To Hasten Delivery of Placenta

1. Alusema.
2. Mixture of lard and peppermint applied to abdomen.
3. Spoonful of lard by mouth to induce vomiting.
4. A "pinch" of quinine.
5. Enema.
6. Blowing in a black bottle.

Miscellaneous

1. If the baby is a boy midwife charges one dollar extra. When asked the reason for that, the answer was: "Boys are worth more to the parents, also more painful to give birth to."
2. A "Holder" is a woman who acts as assistant to midwife. Her duties are to sit or stand back of the patient and assert downward pressure on abdomen.

Patient is usually then suspended by rope around waist line to ceiling. This is customary among the lower class of Mexicans.

3. Tie string to cord after it has been cut and before placenta is delivered. This string is then tied around mothers big toe. This is done to prevent retraction of the cord.
4. Baby's sore eyes can be cured by wiping them with its soiled diaper.
5. Count all elevation or nodules on placenta to determine how many more children the mother will have.
6. During delivery the room should be made as dark as possible.

In conclusion wish to quote the plea of Peter Chamberlen, the younger, written in 1646, when he was asking for instruction and supervision of midwives in England. He says: "Shall want of precedent be here objected? Because there was never any order for instructing and governing midwives, therefore, must there never be? Because multitudes have perished, therefore must they still perish? Because our forefathers have provided no remedy, nor knew any, therefore must we provide none, though we know it?"

Respectfully submitted,
Katherine Hagquist, R.N.
Supervisor, Midwife Control Measures

III

The Midwife Opponents Speak Out

Between 1910 and 1930, much of the medical community found itself caught up in the throes of an acrimonious midwife debate. Indeed, some of the harshest and most acrid criticisms of midwives emanated from the medical profession. Physicians, many of whom were obstetric specialists, assumed a leadership role in the anti-midwife compaign, sparing few words in their condemnation of midwifery.

The selections included in this chapter provide a representative sampling of the arguments put forth by the anti-midwife physicians. The first selection, "Medical Education and the Midwife Problem in the United States," published in the *Journal of the American Medical Association* in 1912, set the tone for future articles of this genre. The author, J. Whitridge Williams, a professor at the prestigious Johns Hopkins University School of Medicine, was one of the leading figures in American obstetrics during the early decades of the twentieth century. Williams based his findings for this article on a study which he conducted for the newly formed American Association for the Study and Prevention of Infant Mortality (AASPIM). The association, founded in 1910 by a group of physicians and public health officials concerned about the nation's high infant mortality rate, published a variety of papers on the need to elevate the status of obstetrics and eliminate the midwife. In fact, a much longer version of "Medical Education and the Midwife Problem in the United States" was published in the *Transactions of the AASPIM* in 1911.

After analyzing the responses to a questionnaire which he sent to obstetric professors in residence at medical schools across the nation, Williams concluded that obstetric education in the United States was woefully inadequate. The forty-three physicians who responded to his

questionnaire frankly admitted that many obstetric professors were poorly prepared for their duties and were unable to cope with obstetric emergencies. Other problems cited were inferior hospital and teaching equipment and a serious shortage of clinical material. Most surprisingly, perhaps, was the disclosure that many professors readily acknowledged that the "average practitioner, through his lack of preparation for the practice of obstetrics, may do his patients as much harm as the much-maligned midwife." Echoing the concerns of the influential 1910 Flexner Report which recommended the upgrading and revising of medical education throughout the United States, Williams called for specific changes within the curriculum of obstetric education that would promote and enhance that emerging specialty. Although he recognized that poorly educated medical men caused as much harm to pregnant women as did midwives, it is significant to note that he was pessimistic about midwifery training, concentrating instead on bringing about reforms within the field of obstetrics and medical education.

Over the next two decades, articles on the "midwife problem" appeared in many of the nation's leading medical journals. The authors of these articles frequently paid homage to Williams for the foresight and wisdom which he displayed in alerting the medical community to the problems associated with poorly trained birth attendants.

Equally well known for his strong opposition to midwifery was Dr. Joseph B. De Lee, the founder of the Chicago Lying-in Hospital (1895). The second selection, "Progress toward Ideal Obstetrics," written by De Lee and published in the *Transactions of the American Association for the Study and Prevention of Infant Mortality* in 1915, clearly demonstrates the potency of the anti-midwife argument. In this article, De Lee labeled the midwife an "anachronism in medicine" and a "drag on the progress of the science and art of obstetrics."

De Lee wrote at length about the low status accorded the specialty of obstetrics, pointing out that as long as women untrained in the medical sciences continued to attend approximately one-half of all births, the obstetrician would never receive the esteem and honor which he deserved. He was one of a growing number of physicians who focused on the pathology and potential dangers associated with childbirth. Five years later, De Lee published a landmark article, "The Prophylactic Forceps Operation," in the *American Journal of Obstetrics and Gynecology* (1920) in which he recommended that the forceps be routinely used for primiparous labors. The increased incidence of forceps deliveries, along with the rise in the number of cesarean births and the gradual shifting of birth from the home to the hospital, served to reinforce the view of the anti-midwife physicians that childbirth was a potentially dangerous and pathological condition that demanded the skills and expertise of the highly trained medical practitioner.

The third selection in this chapter, "The Midwife in Massachusetts: Her Anomalous Position," written by the well-known Boston physician, James Lincoln Huntington, and published in the *Boston Medical and Surgical Journal* in 1913, repeats many of the themes addressed by Williams and De Lee. The title of the article reflects the rather unique situation of the Massachusetts midwife. Unlike other states during this era, Massachusetts specifically outlawed midwifery in 1907. At the same time, however, Massachusetts law required that midwives register all births which they attended. Huntington feared that this birth registration requirement might help open the way to the legalization of midwifery. In fact, a bill which would have provided for the registration of midwives was introduced into the Massachusetts legislature in 1913. From Huntington's perspective, both the medical profession and the public would suffer if midwives were granted legal recognition. Like many other anti-midwife physicians, Huntington also expressed a concern about the economic implications of any plan that allotted formal status to the midwife, arguing that it would "work a definite hardship to those physicians in the state who have become well trained in obstetrics. . . ."

The final selection in this chapter, "The Midwife: Her Future in the United States," was co-authored by Arthur Brewster Emmons and James Lincoln Huntington. First appearing in the *Transactions of the American Association for the Study and Prevention of Infant Mortality* in 1911, the article was reprinted in the March 1912 issue of the *American Journal of Obstetrics and the Diseases of Women and Children*. Emmons and Huntington, both Boston physicians, wrote extensively about the "midwife problem," and their articles appeared in a number of prestigious medical journals including the *American Journal of Obstetrics and the Diseases of Women and Children*, the *Boston Medical and Surgical Journal* and the *Transactions of the AASPIM*.

Emmons and Huntington emphatically called for the abolishment of the midwife. Characterizing the midwifery training and regulatory programs in England and Europe as dismal failures, they seriously questioned whether similar efforts within the United States could succeed (for a favorable assessment of European training programs, see "Midwives in America" by Carolyn Conant Van Blarcom, reprinted in Chapter V). The "foreign" origin of the midwife was yet another reason that they opposed her. Like most other anti-midwife physicians, Emmons and Huntington viewed the elimination of the midwife as a vital and necessary prerequisite for upgrading the status of obstetrics and granting to the obstetrician his due recognition.

5. *Medical Education and the Midwife Problem in the United States*

J. Whitridge Williams

When requested by the Chairman of the Committee on Midwifery of the Association for the Study and Prevention of Infant Mortality to prepare a paper on the midwife problem, I felt that important information on the subject might be elicited by interrogating the teachers of obstetrics throughout the country. Accordingly, I prepared a questionnaire, containing some fifty questions, which is appended, and which was sent to the professors in the 120 medical schools giving a full four-year course. Forty-three professors, representing schools in every section of the country, were good enough to reply.

As some of the queries were decidedly personal in character, I promised not to mention the names of those replying, or the schools with which they are connected; but at the same time I stated that I should feel free to use whatever information might be supplied. It is with great pleasure that I take this opportunity to thank those who replied for their courtesy and frankness, and at the same time to express the hope that their cooperation has not been in vain, as I feel that it will bear fruit by arousing general interest, not only in the midwife problem, but also in the much broader question of medical education, by showing that we have as yet failed to train practitioners competent to meet the emergencies of obstetrical practice.

While the responses were not so general as might be desired, they are nevertheless sufficiently numerous to give a fair idea of the conditions existing throughout the country. Thirty-one replies came from the sixty-one schools which are designated as "acceptable" by the Council on Medical Education of the American Medical Association, as compared with eleven from the fifty-nine non-acceptable schools, not including one from Canada. The forty-three schools replying may be classified as follows:

Eleven of the twenty-three schools demanding two or more years of college work for admission.

Four of the twelve schools demanding one year of college work.

Source: J. Whitridge Williams, "Medical Education and the Midwife Problem in the United States," *Journal of the American Medical Association*, 58 (January 6, 1912), 1–7.

Sixteen of the other twenty-six acceptable schools requiring four years of high-school work.

Eleven of the fifty-nine non-acceptable schools.

One of the acceptable Canadian schools.

The one favorable general impression which I obtained from the entire series of replies is that the forty-three professors of obstetrics who made them constitute a body of unusually frank and truthful men; as otherwise they would scarcely admit the existence of such a condition of affairs as their replies seem to indicate. For many years I have regarded the general attitude toward obstetrical teaching as a very dark spot in our system of medical education, and the majority of the replies to my questionnaire indicate that my pessimism was more than justified. Briefly stated, they indicate (a) that many professors are inadequately prepared for their duties and have but little conception of the obligations of professorship; (b) that a considerable proportion are not competent to cope with all obstetrical emergencies; (c) that nearly all complain that their teaching and hospital equipment is inadequate for the proper training of students; and (d) most serious of all, that a large proportion admit that the average practitioner, through his lack of preparation for the practice of obstetrics, may do his patients as much harm as the much-maligned midwife.

THE PRESENT STATUS OF OBSTETRICS

In the first part of this report I shall attempt to set forth the condition of affairs as revealed by my questionnaire; while in the second part I shall venture to indicate some of the reforms necessary to place obstetrical teaching on a proper basis, and incidentally touch on certain features of the midwife problem, in an attempt to indicate how the public may obtain better obstetrical treatment. With this in mind, I shall take up separately each question of the questionnaire, and after giving the gist of the replies as objectively as possible, I shall make whatever critical remarks I may consider indicated. It is scarcely necessary for me to state that I have endeavored to reproduce faithfully the statements of my collaborators, for which I am in no way responsible; while my own views, and possibly my prejudices, will appear in the latter part of the report.

Questions I to IV: These need not be considered, as they were asked only for purposes of orientation.

Questions V and VI: *Are you engaged in general practice or do you limit your work to gynecology and obstetrics, or to obstetrics alone?*

Seventeen professors replied that they were in general practice in addition to their college duties; twenty-one that they limited their work to obstetrics and gynecology, and five other solely to obstetrics. Accordingly, considerably more than one-third of the professors, including

four in the so-called high-standard schools, are not specialists in any sense, and owing to the obligations of a large general practice have not sufficient leisure to become thoroughly versed in all of the problems in obstetrics and must necessarily take their professorial duties lightly. Moreover, five professors, including three in high-standard schools, limit their work exclusively to obstetrics; and as several of them admit that they are not competent to perform major operations, it is apparent that they cannot be ideal teachers.

Question VII: *Did you serve as a hospital assistant or intern immediately following graduation?*

To this question, fifteen professors, including three in high-standard schools answered in the negative, seventeen replied that they had served for less than one year, and eleven for a longer period.

At first glance this appears far from satisfactory, but when it is remembered that many of the professors graduated twenty or more years ago, it is not quite so poor, as at that time the facilities for serving as an intern in a general hospital were much more limited than at present. Consequently, it merely indicates that many of our professors did not receive rigorous hospital training in their youth, but gained their practical experience almost exclusively from private practice.

Question VIII: *Why did you take up obstetrics?*

The forty-one answers to this question may be divided into four categories. Eight professors deliberately chose obstetrics as their life work and endeavored to obtain as ideal a training for its pursuit as possible. Thirteen stated that they were always interested in the subject, and nine that they were very much interested before taking it up seriously. On the other hand, eleven stated that chance alone led them to teach this branch of medicine. Several accepted the professorship merely because it was offered to them, but had no special training or liking for it, while others succeeded to it after having taught various other branches with more or less success.

Question IX: *What was your preparation for teaching?*

Prior to assuming their professorial duties, twenty-one, or slightly less than one-half of the entire number of professors, served for varying periods in lying-in hospitals. In eleven instances the service varied from one to five months, in five it extended over six months, while in five other it covered one or more years.

Such a confession appears highly depressing, but on further consideration it must be admitted that it is about what might be expected in this country; as twenty-five of the professors graduated twenty or more years ago, when very few lying-in hospitals were in existence, and those poorly equipped and offering but slight opportunity for clinical observation. Such conditions, however, are in marked contrast with those obtaining in Germany and France, where the first requirement for a

professorial career is a long period of preparation in a well-equipped lying-in hospital with abundant clinical material. At the same time, it must be noted that the preparation of a considerable number of our professors was augmented by service for varying periods in more or less well-organized out-patient departments.

Even more serious than the lack of rigorous hospital training, is the appallingly slight experience which many had before being appointed to professorships. The replies indicate that only nine of the entire number had seen 1,000 or more cases of labor, and twenty-two others considerably less, while eleven obtained their practical experience solely from an indefinite number of cases in private practice. Moreover, it is interesting to note that one professor admits that he had never seen a woman delivered before assuming his professorship, while five state that they had seen less than 100 cases, and thirteen others less than 500 cases.

Think of becoming a professor of obstetrics wih an experience of less than 100 cases!

After considering the answers to this question, I think that it is difficult to avoid the conclusion that the majority of our professors entered on their duties with a comparatively poor equipment from a practical point of view, while their attainments in the underlying sciences were usually extremely faulty.

Question X: *Have you studied abroad?*

The replies show that twenty-four of the forty-three professors have visited Europe, of whom fourteen, or one-third of the entire number, worked for three months or more in some well-organized clinic. This is a fairly satisfactory showing, and indicates that many of our professors were not satisfied with their home training, which they attempted to supplement by further work in well-equipped European clinics.

Question XI: *Is a lying-in hospital connected with your school?*

The answers to this question are in general very depressing, and show that six schools have no connection with a lying-in hospital. Of the other thirty-seven, nine have hospital accommodations for less than 100 patients per year, fifteen for more than 100 but less than 250, four for 250 but less than 500; and nine for 500 or more patients per year, including two schools with accommodations for over 1,000 patients. These figures indicate that most schools are very poorly equipped in this regard, as only nine have anything like adequate clinical material for the instruction of their students. Moreover, with a few exceptions, even the best of our lying-in hospitals are vastly inferior, as far as the number of patients and equipment for teaching are concerned, to the clinics in the smaller German universities.

Twenty of the thirty-seven lying-in hospitals are owned and controlled by the school with which they are connected. Apparently, a most ex-

cellent showing; but closer examination shows that the conditions are not so ideal, as seven of the college-controlled hospitals have less than 100 deliveries per year, and only five out of the entire number more than 250.

In order to give an idea of the deplorable dearth of clinical material, I have tabulated the figures from ten of the smaller lying-in hospitals with from twenty-five to 125 deliveries per year, including two connected with high-standard schools. Together they have only 553 cases for the instruction of 575 students; and when it is remembered that, owing to the long summer holiday and other causes, practically one-half of the cases are lost for purposes of instruction, it is apparent that each student on an average has an opportunity to see only one woman delivered, which is manifestly inadequate. Moreover, the conditions are only slightly better, when the combined facilities of all of the twenty hospitals owned by the medical colleges are considered, as together they present a total of 5,655 deliveries per year for 1,100 students requiring clinical instruction, which means an average of only four cases per student.

Naturally, such calculations do not accurately represent the actual facts, as they are based on the supposition that only two students see and examine each woman in labor. Moreover, in certain schools the number of cases available is considerably less than the average, while in others it is greater. The actual figures show that in twenty-five schools each student sees three cases or less, in nine schools four to five cases, and in eight others five or more cases; while in some of the smaller hospitals this is possible only by having four to six students examine each patient, thereby subjecting her to unjustifiable risk of infection. Accordingly it would appear that in only eight of the medical schools under consideration do the students have an opportunity to witness anything like a satisfactory number of deliveries under appropriate clinical conditions. On the other hand, ambitious students may see a greater number of cases provided they are willing to work in their own schools during the summer months, or can afford to take a course in one of the large institutions, such as the New York Lying-In Hospital, which are not connected with a medical school.

Turning from the actual number of cases available for clinical instruction, to the opportunities afforded for training assistants, who should become the professors of the future, it is difficult to speak too strongly. In the thirty-seven lying-in hospitals under consideration, it is apparent that this function is in great part neglected, as is shown by the fact that the period of service is usually too short to permit training well-rounded men. Thus, in thirteen institutions the assistants serve for periods varying from one to six months; in four for six months or more but for less than one year; in fifteen for one year; and in only five for a longer period, including two in which the service extends over four years. Conse-

quently, it may be said that proper training can probably be afforded only in the five schools in the latter group, as in my experience assistants at the end of the first year are just becoming useful and are able to make a correct diagnosis only in the simpler cases, so that even with a comparatively large material, their experience is relatively so slight that they are not prepared to cope with serious emergencies even when they are recognized.

Question XII: *Do you maintain an outdoor obstetrical service?*

The following answers were received: Five, none; six, small services without data as to number of patients; sixteen, with less than 250 deliveries; six, with between 250 and 500 deliveries; five, with between 500 and 1,000 deliveries; and five, with 1,000 or more deliveries per year.

At first glance these figures appear much more satisfactory than those for lying-in hospitals, as they show that ten of the schools have a fair out-patient material. At the same time, I have learned from my own experience that the value of such a department for teaching purposes is dependent on so many factors that the mere number of women cared for gives no idea of its adequacy. In order to be efficient for teaching, an out-patient service must be held in rigid discipline, be organized as an integral part of the regular obstetric service, and conducted through the lying-in hospital. Moreover, the students should not be sent to the homes of the patients alone, but should always be accompanied by an assistant to demonstrate the case, as well as by a trained nurse to prepare the patient properly and to render her surroundings as sanitary as possible.

In order to give an approximate idea of the total amount of clinical material available, I have calculated the total number of ward and out-patient cases in the various schools, on the supposition that two students see and examine each indoor, and one student each outdoor patient. The following table shows a progressive decrease in the number of cases in each of the four groups, according as the schools require for entrance two years, or one year of college work, or merely a high school education, or less:

I. 10 cases to each student, with extremes of 2 and 21 cases
II. 7 cases to each student, with extremes of 3 and 10 cases
III. 6 cases to each student, with extremes of 1 and 27 cases
IV. 3 cases to each student, with extremes of 0 and 12 cases

At the same time, it must be admitted that the average for the first group is considerably too high, which is due to the fact that one of the schools in this category has an immense hospital and outdoor service.

Question XIII: *What are your relations with the gynecologic service both in the medical school and the hospital?*

Answers obtained from forty-two schools show that in twenty-four there is no cooperation, in five cordial cooperation, while in thirteen the two departments are more or less closely united. In the last category, the chairs of obstetrics and gynecology are united in eight schools; in two the chairs are separate but are held by the same incumbent; while in three the professor has a joint hospital service, but teaches only obstetrics.

From the standpoint of training students and assistants, such a lack of cooperation is greatly to be deplored, more particularly as it prevents the development of broad-minded professors, who are able to cope with all complications arising from the female generative tract. In hospitals in which there is no cooperation between the two departments, the obstetrician is generally looked down on by the gynecologist and is usually afforded markedly inferior facilities for his work. From my own experience, both in this country and abroad, I am convinced that it is essential that the obstetrician be a competent surgical operator; and, as the number of radical operations in obstetrics is comparatively limited, the most natural method of obtaining the requisite facility is by means of gynecologic surgery. I hold that one may be a fair gynecologist with only an elementary knowledge of obstetrics, but that no one can be a competent obstetrician without being at the same time a trained gynecologist. For these reasons, I consider from the standpoint of teaching that the schools in which the two chairs are fused will possess a considerable advantage.

Question XIV: *Are you competent to operate on any complications arising from the female generative tract*?

To this thirty-five professors answered "yes," and eight "no"; and these figures I imagine, are much more favorable than the actual facts. Several professors frankly admit that they are not prepared to perform Cesarean section.

Consider that such a condition of affairs means that the professor is merely a man-midwife, who is unable to carry a complicated case of labor to its legitimate conclusion! Or, imagine the effect on a patient, who places herself in the hands of a professor of obstetrics in a respectable medical school, when she is told that he can conduct the case satisfactorily if it is ended by the unaided efforts of Nature, or merely requires some slight interference, but in case radical interference is demanded he will be obliged to refer her to a gynecologist or surgeon. Think of the impression such an admission must make on the student, who cannot be blamed for believing that obstetrics is a pursuit unworthy of broadly educated men, but is suitable only for midwives or physicians of mediocre intelligence. This is not the place to go into the details of this question, but I have no hesitation in asserting that a professor of obstetrics who is not prepared to perform a Cesarean section or other

radical operation is not competent to undertake the care of a case of labor complicated by pelvic contraction, and is not fitted to teach modern obstetrics.

Question XV: *Can you care for a case of ruptured uterus, advanced extra-uterine pregnancy or excision of the pelvic veins, as well as your gynecologic confrère?*

To this thirty-two respondents answered "yes," and eleven "no." If one-fourth of the professors, including three in the high-class schools, make such an admission, it is safe to assume that a much larger number should be included in the same category. Moreover, when it is recalled that seventeen professors are engaged in general practice, and that five more limit their attention solely to obstetrics, and accordingly have but little opportunity to perfect themselves in operative technic, it is safe to assume that at least one-half of those replying to the questionnaire are unable to cope satisfactorily with these legitimate obstetrical complications.

Question XVI: *Do you consider your hospital and teaching equipment satisfactory*?

To this fourteen respondents answered "yes," and twenty-nine unhesitatingly "no." In other words, the professors in two-thirds of the schools frankly admit that the conditions are highly unsatisfactory. If this were all it would be a grave admission; but the actual conditions are worse, and there is no justification for many of the affirmative answers.

I think that I am fairly conversant with the existing conditions, and as far as I know there is only one medical school in the country which is properly equipped for teaching obstetrics and gynecology along the lines of a well-conducted German women's clinic. And I regret to say that it is not at the Johns Hopkins Hospital, whose lying-in department is very inferior, and far below the standard maintained by the other departments of that institution. At present, plans are being perfected in one of the eastern cities for the construction of an almost ideal women's clinic, but unfortunately, it will be merely affiliated with, and not controlled by, the medical school. Three other fair-sized and well-equipped lying-in hospitals are also affiliated with medical schools, but are equipped only for practical clinical work and not for investigation.

On the other hand, in my opinion the favorable verdict concerning the equipment of the other nine schools is unjustifiable, and the fact that it is designated as satisfactory shows to what a slight extent many professors comprehend the obligations of a teaching position. A few examples will, I think make this contention clear. One so-called satisfactory clinic has only thirty-five cases a year for the instruction of forty students. In three others the period of service for the assistants is, respectively, one and one-half, three and six months. Another lying-in hospital has no free beds, and the clinical instruction is given entirely

in a large out-patient service. In a sixth "satisfactory" school the professor admits his inability to do a Cesarean section; in still another the director knows so little of his department that he is unable to give the number of beds under his control; and finally, the last school in this category stands low in the non-acceptable list, and is notorious for its poor equipment and the frequent failure of its students before state boards throughout the country.

Question XVII: *What is necessary to make your equipment satisfactory?*

Leaving out of consideration the fourteen "satisfactory" schools just mentioned, the answers reveal an extremely depressing condition of affairs. On this occasion it would lead us too far afield to enter into details, but I imagine that the mere enumeration, under the following headings, of the main needs mentioned will suffice to prove that the conditions are far from ideal:

A. Need everything.
B. Need a lying-in ward.
C. Need a lying-in ward controlled by the school.
D. Need accommodations for more patients.
E. Need more intelligent assistants who serve for longer periods.
F. Need more money for current expenses or endowment.
G. Need better-prepared students.

On the other hand, no one mentioned the need of broad-minded, scientifically trained teachers, or of properly equipped laboratories for investigative work.

Question XVIII: *Have you ever trained a man who, you felt, was competent on leaving you to become professor of obstetrics in a first-class medical school?*

Twenty-six respondents answered in the negative, while one naively replied "that he had never been called on to do so." On the other hand, seventeen professors answered in the affirmative, and several stated that they had trained a number of men of professorial caliber. As so imposing an output was somewhat of a surprise to me, I analyzed the replies with some interest.

If the figures are correct, it is pertinent to inquire what has become of the young professors! I do not know where they are located; and, as there are not seventeen first-class medical schools in the country, the discrepancy is explicable only on the supposition that many died in early youth, or that the respondents over-estimated their attainments. Furthermore, it is interesting to inquire where they received their training and who were their teachers. As has already been indicated there are only five lying-in hospitals which keep their assistants for longer than

one year; consequently, as it is hardly possible to train a competent professor in a shorter time, it must follow that most of them must have received their training in these schools, which is unlikely.

Again, it may be asked whether all of the seventeen professors giving positive answers are competent to train such men. This also does not appear probable, for, although I have been a close student of medical literature for the past twenty years, I do not recall having seen an article, good, bad or indifferent from five of them; and it is highly improbable that totally unproductive men would be able to stimulate young men to become excellent professors. Moreover, in some instances it would have been impossible for them to have obtained their knowledge from the obstetrical clinics of their own school, as less than 100 patients are delivered per year in four of the hospitals concerned, while one has only twenty-five patients. Furthermore, one is connected with a most notorious non-acceptable school, and several more, to my knowledge, are poorly equipped in buildings, clinical material and facilities for investigation. On the other hand, it is a pleasure to admit that a small number of the schools are doing good work in this direction and have turned out several men of really first-class professorial caliber.

The replies in general are very discouraging, as they indicate, in the first place, that it is usually impossible for ambitious young men to obtain in the schools from which they graduate anything like sufficient opportunity to equip themselves for a teaching career; and, in the second place, they force us to conclude that many professors take their duties very lightly, and have but little conception of the obligations connected with a properly conducted professorship. If this is the case, is it not absurd to expect such men to inspire students with a proper conception of obstetrics, or to deserve and maintain the respect of members of their own faculty or of the profession in the neighborhood in which they live?

Question XIX: *Do you consider that the ordinary graduate from your school is competent to practice obstetrics*?

Eleven teachers, or one-quarter of the entire number, promptly answered "no"; while the remainder replied in the affirmative, although in many instances in a somewhat qualified manner. Thus, one replied: "Well, yes in a way; that is, some of them." It appears to me that the affirmative answers, as a rule, are more positive the poorer the school and the smaller its clinical material. That this is not an exaggeration is shown by the fact that affirmative replies came from several of the schools without lying-in hospitals, as well as from two others with only twenty-five cases per year available for the instruction of fifty students.

At the same time, most of the teachers qualify their affirmative answers by stating that their graduates are competent to conduct normal cases, while several others designate them as fairly efficient men-midwives. Moreover, most of them admit that their graduates are not competent

to conduct operative labors, while several state that they deteriorate rapidly in technic after leaving the medical school.

After eighteen years' experience in teaching what is probably the best body of medical students ever collected in this country—the student body at the Johns Hopkins Medical School for the year 1911–1912, being made up of graduates from one hundred and twenty-eight colleges and universities in this country and Europe—I would unhesitatingly state that my own students are unfit on graduation to practice obstetrics in its broad sense, and are scarcely prepared to handle normal cases.

Question XX: *What proportion of labor cases in your city are attended by midwives?*

The replies indicate great variations in different localities. Midwives are almost unknown in Montreal, and I am informed that only twenty-five practice in Boston. On the other hand, in most of our large cities including New York, Chicago, St. Louis and Atlanta, they conduct from 40 to 60 per cent of all labor cases.

In regard to their licensure, eight teachers pleaded ignorance of conditions, while twenty-five stated that they were licensed and ten that they were not.

Concerning their necessity, there was still a wider divergence of opinion. Twelve professors replied that they did not possess sufficient data to justify an expression of opinion; while of the thirty-one giving positive answers, fifteen stated that they were necessary and sixteen not.

After analysis of the replies to this question, it is apparent that midwives attend many cases in most of our large cities, but that their employment is dependent on local conditions rather than general necessity; as is shown by the replies from Boston and Montreal. In most localities some attempt is made to control them in a feeble way, but nowhere effectively, while the teachers of obstetrics throughout the country are about equally divided as to their necessity.

Question XXI: *Do you believe that more women die from puerperal infection in the practice of midwives or of general practitioners?*

This question, as well as the one immediately following, cannot be answered with accuracy; consequently the replies must be taken as the general impression of the respondents, rather than as precise statements based on exact statistics. In order to draw perfectly correct conclusions many factors would have to be considered, concerning which accurate information is not at present available.

Consequently, as the replies represent merely the general impression of the various respondents, they are subject to many fallacies and are thereby greatly reduced in value. Nevertheless they are of great interest and are as follows: Eight teachers replied that they did not possess sufficient data on which to base an opinion; while of the thirty-five who

answered, fifteen stated physicians, thirteen midwives and five that the death-rate is almost equal.

Accordingly, it appears that somewhat more than one half of the teachers replying consider that general practitioners lose proportionately as many women from puerperal infection as do midwives. Even if based on somewhat faulty premises, such a conclusion is appalling, and is a railing indictment of the average practitioner and of our methods of instruction in obstetrics, more particularly as one of the main arguments urged against the midwife is the prevalence of infection in her practice.

Question XXII: *Do as many women die as the result of ignorance, or of ill-judged and improperly performed operations, in the hands of general practitioners, as from puerperal infection in the hands of midwives*?

The same objection applies to this as to the former question, and consequently the answers must be regarded merely as the general impression of the respondents, some of whom are necessarily biased in their opinions. Eight teachers state that they are not prepared to answer the question; while of the thirty-five who do so, twenty-six answer against the general practitioner, six against the midwife and three hold that the two are equally bad. Moreover, many direct attention to the unnecessary death of large numbers of children, as the result of unnecessary or improper operating, and from the failure to recognize the existence of contracted pelvis.

If it appears necessary to reform anything, here is the opportunity. Why bother about the relatively innocuous midwife, when the ignorant doctor causes quite as many absolutely unnecessary deaths? From the nature of things, it is impossible to do away with the physician, but he may be educated in time; while the midwife can eventually be abolished, if necessary. Consequently, we should direct our efforts to reforming the existing practitioner, and to changing our methods of training students so as to make the physician of the future reasonably competent.

Question XXIII: *How do you consider that the midwife problem can best be solved*?

Thirty-four answers to this question gave the following result: Eighteen advocated the regulation and education, and fourteen the abolition of midwives, while one advocated that the question be left *in statu quo*, and another held that the only solution lay in better-trained doctors.

On analyzing the replies several interesting facts were elicited. Thus, a thoroughly competent professor in one of the large western cities, in which more than one-half of all labors are conducted by midwives, states that, although the smaller portion of the obstetrical work in his city is in the hands of physicians, his experience forces him to conclude that the latter nevertheless lose from infection many more women than do the midwives.

Again, one of the respondents from New York City states that owing to the extension of lying-in charities, midwives now attend many less women than formerly, notwithstanding the rapid increase in the population of the city. A similar statement comes from Cincinnati, where, without stringent regulation, the number of women attended by midwives has decreased from 70 per cent. in 1880 to 30 per cent. in 1909, thus tending to indicate that prolonged residence in this country gradually overcomes the prejudices of our foreign-born population against the employment of physicians.

Those who advocate regulation and education vary greatly in their ideas, some advocating mere general regulation, while others demand extensive education in properly equipped hospitals, as in Germany and Italy, with constant supervision by the board of health, which should have power to revoke licenses whenever necessary.

Equally divergent arguments are advanced by those favoring the abolition of midwives. One group regards as hopeless any attempt to train them efficiently, while another holds that they may be entirely done away with by educating the laity, by extending lying-in charities, and by supplying better doctors and cheaper nurses; while my own views will be expressed in the second part of the paper.

Question XXIV: *Can you suggest any practicable method of improving the general standard of practical obstetrics outside of hospitals*?

The mere fact that all but two of those answering my questionnaire make definite suggestions in this regard, offers further proof of the deplorable condition of obstetrical education and practice, and indicates the urgent need for reform.

It would lead too far to consider all of the suggestions in detail, and I shall content myself by enumerating the main ones, which are so arranged as to indicate the order of frequency in which they were made:

1. Better teaching and more abundant lying-in hospital accommodations.
2. Instruction of the profession and laity that obstetrics is surgery, and that its major operations are as serious as laparotomies.
3. Education of the laity concerning existing conditions and insistence that the proper place for major obstetrics is a well-conducted hospital.
4. Regulation of obstetric practice by the state boards of health, which should grant a provisional license to practitioners, revocable on demonstration of incompetency or neglect.
5. Better education of practitioners. A number of respondents do not believe that the present generation can be materially improved.
6. Teaching both doctors and the laity that the ordinary practitioner should attend only normal cases, and should refer the abnormal ones to specially trained men connected with well-equipped hospitals.
7. Better pay for practitioners doing general obstetrical work, as it is held that

it is useless to expect expert care for compensation which is generally regarded as adequate.

8. The collection and general dissemination of accurate statistics concerning the mortality of childbirth, as well as the injuries and illness which result from improper care.
9. Elevation of the importance of obstetrics in the eyes of practitioners, medical students and the laity.
10. Marked extension of obstetric charities and well organized lying-in hospitals.
11. Greater development of visiting nurses for those of moderate means, and the education of trained helpers to carry out their directions.
12. Differentiation of students into classes, one of which should be educated as men-midwives, and the other as broadly trained obstetricians.

I am convinced that no fair-minded person who is interested in the welfare of the women and children of our country, or in the problems of medical education, can read the foregoing analysis without feelings of profound depression, or without admitting that we are facing a condition urgently in need of reform.

The replies clearly demonstrate that most of the medical schools included in this report are inadequately equipped for their work, and are each year turning loose on the community hundreds of young men whom they have failed to prepare properly for the practice of obstetrics, and whose lack of training is responsible for unnecessary deaths of many women and infants, not to speak of a much larger number, more or less permanently injured by improper treatment, or lack of treatment. Moreover, the spontaneous admission by most of the respondents that poor training of medical men is responsible for many unnecessary deaths in childbirth, forces us to acknowledge that improvement in the status of the midwife alone will not materially aid in solving the problem.

A priori, the replies seem to indicate that women in labor are as safe in the hands of admittedly ignorant midwives as in those of poorly educated medical men. Such a conclusion, however, is contrary to reason, as it would postulate the restriction of obstetrical practice to the former, and the abolition of medical practitioners, which would be a manifest absurdity.

The fault lies primarily in poor medical schools, in the low ideals maintained by inadequately trained professors, and in the ignorance of the long-suffering general public.

SUGGESTED REMEDIES

What is the remedy for these conditions? I shall enumerate some of them, but their mere number indicates how serious the problem is, and

how impossible it will be to consider them all adequately at the present time.

Some of the necessary reforms are:

I. Better and properly equipped medical schools.
II. Higher requirements for the admission of students.
III. Scientifically trained professors of obstetrics with high ideals.
IV. General elevation of the standards of obstetrics.
V. Education of medical practitioners.
VI. Insistence by state examining boards on better training before admitting applicants to practice.
VII. Education of the general public.
VIII. Development of lying-in charities.
IX. Cheaper nurses.
X. Possibly the training of midwives.

SUMMARY AND CONCLUSIONS

A questionnaire containing some fifty questions concerning obstetric education and the midwife problem was sent to the professors of obstetrics throughout the country. Forty-three replies were received, representing one-half of the acceptable and one-fifth of the non-acceptable medical schools, which indicate a most deplorable condition of affairs, briefly as follows:

1. Generally speaking the medical schools are inadequately equipped for teaching obstetrics properly, only one having an ideal clinic.
2. Many of the professors are poorly prepared for their duties and have little conception of the obligations of a professorship. Some admit that they are not competent to perform the major obstetric operations, and consequently can be expected to do little more than train men-midwives.
3. Many of them admit that their students are not prepared to practice obstetrics on graduation, nor do they learn to do so later.
4. One-half of the answers state that ordinary practitioners lose proportionately as many women from puerperal infection as do midwives, and over three-quarters that more deaths occur each year from operations improperly performed by practitioners than from infection in the hands of midwives.
5. Reform is urgently needed, and can be accomplished more speedily by radical improvement in medical education than by attempting the almost impossible task of improving midwives.
6. In my opinion the following reforms are most important:
   A. Reduction in the number of medical schools, with adequate facilities for those surviving, and higher requirements for admission of students.

B. Insistence in university medical schools that the head of the department be a real professor, whose prime object is the care of hospital patients, the proper training of assistants and students and the advancement of knowledge, rather than to be a prosperous practitioner.
C. Recognition by medical faculties and hospitals that obstetrics is one of the fundamental branches of medicine, and that the obstetrician should not be merely a man-midwife, but a scientifically trained man with a broad grasp of the subject.
D. Education of the general practitioner to realize that he is competent only to conduct normal cases of labor, and that major obstetrics is major surgery, and should be undertaken only by specially trained men in control of abundant hospital facilities.
E. The requirement by state examining boards that every applicant for license to practice shall submit a statement certifying that he has seen delivered and has personally examined, under appropriate clinical conditions, at least ten women.
F. Education of the laity that poorly trained doctors are dangerous, that most of the ills of women result from poor obstetrics, and that poor women in fairly well-conducted free hospitals usually receive better care than well-to-do women in their own homes; that the remedy lies in their hands and that competent obstetricians will be forthcoming as soon as they are demanded.
G. Extension of obstetric charities—free hospitals and out-patient services for the poor, and proper semi-charity hospital accommodations for those in moderate circumstances.

7. Greater development of visiting obstetric nurses and of helpers trained to work under them.
8. Gradual abolition of midwives in large cities and their replacement by obstetric charities. If midwives are to be educated, it should be done in a broad sense, and not in a makeshift way. Even then disappointment will probably follow.

6. *Progress Toward Ideal Obstetrics*

Joseph B. De Lee

I desire to state that I am fundamentally opposed to any movement designed to perpetuate the midwife. These are the grounds.

I. The midwife destroys obstetric ideals. She is a drag on our progress as a science and art.
II. The midwife is not absolutely necessary at the present time.
III. European countries, for centuries, have been trying to bring the midwife up to a tolerable standard and measured even by their low ideals, have failed miserably.

I. *The midwife is a relic of barbarism.* In civilized countries the midwife is wrong, has always been wrong. The greatest bar to human progress has been compromise, and the midwife demands a compromise between right and wrong. All admit that the midwife is wrong: It has been proven time and again that it is impossible to make her right—further, a part cannot be equal to the whole, and yet there are those who, crying expediency, are willing to foster and perpetuate this evil.

There is here a struggle between expediency and idealism. The midwife has been a drag on the progress of the science and art of obstetrics. Her existence stunts the one and degrades the other. For many centuries she prevented obstetrics from obtaining any standing at all among the sciences of medicine.

Even after midwifery was practiced by some of the most brilliant men in the profession such practice was held opprobrious and degraded. Less than 100 years ago, in 1825, the great English accoucheur Ramsbotham complained of the low esteem in which he was held by his brother surgeons. He was denied admittance to the Royal College and his colleagues would not dare to be seen talking to him on the street! This opprobrium, to a decided extent, still attaches to the accoucheur and his work. Obstetrics is held in disdain by the profession and the public. The public reasons correctly. If an uneducated woman of the lower classes may practice obstetrics, is instructed by the doctors, and licensed by the State, it certainly must require very little knowledge and skill—surely it cannot belong to the science and art of medicine.

Ziegler, of Pittsburgh, says: "Both the teaching and practice of ob-

Source: Joseph B. De Lee, "Progress Toward Ideal Obstetrics," *Transactions of the American Association for the Study and Prevention of Infant Mortality*, 6 (1915), 114–123.

stetrics are generally regarded as the poorest of all the clinical branches of medicine. There must be a reason for this. The lay public will continue to regard with indifference all pleas for the improvement in the teaching of the practice of obstetrics so long as more than 50 per cent of confinements are in the hands of ignorant, non-medical persons, who, as a class, are regarded as capable of doing the work satisfactorily, even by physicians, among whom are certain well-known professors of obstetrics."

Why should there be a double standard in obstetrics? Is there to be one standard for midwives and one for doctors? Should there be two standards of skill when common sense and science demand only one? Would the surgeons tolerate a renaissance of the cutters for stone? Do the ophthalmologists favor a school for the instruction of optometrists, spectacle fitters? And can anyone deny that the spectacle vendor does much less harm than the midwife? Why not train the chiropractors and Christian Scientists also? They do as much harm as the midwife. An editorial from the Illinois Medical Journal is apropos:

WANTS EQUAL STANDARDS

The committee on medical education of the Illinois Medical Society in its last report calls attention "to the inequitable provision in the Illinois statutes which exacts certain requirements of prelimiary education and prescribed medical courses of applicants for medical licensure while practitioners of other systems of healing and midwives are required only to pass an examination, without preliminary educational requirements. It certainly looks like class legislation and legislation which does not conserve the health and lives of the people. If the state board has power under the present practice act, and we think that it has such power, to exact similar educational requirements of other practitioners and midwives, we hereby recommend that this be done, to the end that all licensures shall be placed on an equitable footing."

The medical schools are raising the standards of medical teaching all along the line. Preliminary education, thorough and complete courses in all branches, even a fifth or hospital year, are being demanded. And yet we are to try to educate, in a few months, an ignorant woman up to responsibilities of cases with mortalities which would stagger the best of surgeons. Is not this a jump backward and should we subscribe to this anomaly, this anachronism in medicine?

The midwife is innocent of the trouble she causes and of the high mortality and morbidity among the mothers and babies. It is not her fault that she is allowed to practice such a delicate profession, carrying such direful responsibilities. If the doctors recognized the dignity of obstetrics she could not exist. Engelman says: "The parturient suffers under the old prejudice that labor is a physiologic act," and the profession entertains the same prejudice, while as a matter of fact, obstetrics

has great pathologic dignity—it is a major science, of the same rank as surgery.

Certainly, having babies is a natural process, and, in the intention of nature should be a normal function, yet there is no one here who can deny that it is a destructive one. We all know that even natural deliveries damage both mothers and babies often and much. If child-bearing is destructive, it is pathogenic, and if it is pathogenic it is pathologic.

I do not have to go far to prove these statements, and will cite only a few facts. That 20,000 women die in the United States every year, during childbirth, is a very conservative estimate. Hundreds of thousands of women date lifelong invalidism from apparently normal confinement, and our local findings are very meager. A few of the less prominent but proven sequences of childbirth are—laceration of the cervix, parametritis postica, chronic metritis, sterility; again—laceration of the perineum, rectocele, pelvic congestion, patulous vulva, chronic infection of the vagina, cervix, uterus, etc.; again—urethrocystocele, cystitis, ureteritis, pyelitis, nephritis—and combinations of all these leading to incurable invalidism. Of the more evident damages, prolapse of the uterus, and deviations of this organ may be mentioned, and, let this be emphasized, these admittedly pathologic sequences, not seldom, but often follow so-called *normal* labor.

As for the babies there is a birth mortality of at least 3 per cent in spontaneous deliveries, and there is a larger percentage of brain injuries than can be proven by available statistics.

Thus far I have had in mind only natural deliveries—so called normal labors. Let us remember the complications of pregnancy and labor, placenta previa, eclampsia, abruptio placentae, ruptura uteri—accidents occurring with startling suddenness and requiring instant treatment. They have a mortality of from 15 to 80 per cent—as high if not higher than any of the complications of surgery. And we are to trust the prevention of these accidents, these diseases, these deaths to ignorant midwives!

If the profession would realize that parturition, viewed with modern eyes, is no longer a normal function, but that it has imposing pathologic dignity, the midwife would be impossible even of mention. The double standard of obstetric practice would be abandoned.

It is a general complaint of obstetric teachers that young physicians will not adopt obstetrics for their specialty. That the work is hard, that obstetrics is a jealous and exacting mistress, is appreciated, but neither deters the young man, because the science and art of obstetrics are the most interesting and gratifying in medicine. What does deter him, and it may be said without disparagement, is the fact that his arduous labor and sacrifice of time, of comfort and self, are not appreciated and requited with respect and remuneration. These two go together. If the

public would acknowledge the dignity of his specialty it would properly remunerate him for his services. If the specialty were as remunerative as the other departments of medicine it would attract to itself a large number of young men. The capable accoucheurs instead of being rare, as now, would be very numerous and the mortality and morbidity of childbearing women would rapidly approach a tolerable minimum.

But as long as the medical profession tolerates that brand of infamy, the midwife, the public will not be brought to realize that there is high art in obstetrics and that it must pay as well for it as for surgery. I will not admit that this is a sordid impulse. It is only common justice to labor, self-sacrifice, and skill.

It is generally admitted that more women die during confinement in the hands of doctors than among midwives. Williams, in his remarkable and epoch-making paper seems to have demonstrated this as the prevalent opinion. The fact that only 40 per cent of the women of the United States employ midwives does not explain the difference. There seems to be actually a larger number. In England as a result of stricter regulations for the midwives, their mortality decreased, but the total mortality throughout the land remained about the same. Would these, seeming facts, not indicate that the standard of practice of the doctors required raising, and would it not also follow that we could save more lives by increasing the number of skillful accoucheurs? The energy directed to the training of midwives would bring greater results if spent on the doctors. This would improve the condition of the 60 per cent—and the 40 per cent would be benefited indirectly, also.

We are asked to educate the midwife as a matter of expediency, to provide a little better care for the poor, the ignorant woman or foreigner, and, we are told, though I do not belive it, that 40 per cent of the women in American *must* have midwives. The 60 per cent employing doctors are well to do, or at least not paupers—educated, and Americans.

Now, I hope I will not be misunderstood in what I am going to say. I will take second place to no man or woman in my regard for the poor, the ignorant, the foreign born, childbearing mother. Those who know my work among them will bear witness to this. But I have just as high a regard for the well-to-do, the educated and the American woman, and I must raise my voice against a measure which, I am convinced, from 25 years of deep, close, observation and study, will tend to jeopardize her health and her life. While we may, by educating midwives, improve somewhat the condition of the 40 per cent, we will delay progress in ameliorating the evil conditions under which the 60 per cent now exist. For every life saved in the 40 per cent we will lose many more in the 60 per cent.

Ideas and ideals are the hardest things in the world to establish, but once established they are impossible of eradication and they raise the

plane of human existence. It is, therefore, worth while to sacrifice everything, including human life, to accomplish the ideal. Witness what is going on in Europe! Knowing this I am willing, for the time, to close my eyes to what the midwives are doing, and establish high ideals. Then all, poor and ignorant, as well as rich and educated—the 40 per cent as well as the 60 per cent will enjoy the benefits of improved conditions.

In all human endeavor improvement begins at the top and slowly percolates down through the masses. One man runs ahead of the crowd and plants a standard, then drives the rest up to it. Search history, biblical and modern, and this fact stands out brilliantly.

Philanthropic workers, everywhere, are convinced that remedial measures, meeting conditions as they exist, only salve the sores of society, and perpetuate the underlying evils.

II. *The Midwife today is not an absolute necessity.* The midwife is slowly disappearing in America. In the rural districts of Illinois she is almost unknown. Dr. A. E. Diller, of Aurora, found some of the counties did not have a single midwife, they were only in the large towns and cities. The Secretary of the Illinois State Board of Health says that about 1,200 midwives are registered, of which 900 are in Chicago.

Of the 101 counties in the State of Illinois Dr. Diller received statistics from 87. There were no births registered by midwives in 37 counties, which means that there are no midwives in these counties. Of the 55,187 births registerd in the State *outside* Chicago the past year, 51,832 were registered by doctors and 3,353 by midwives.

There are 201 midwives registered in Indiana, of which 125 are in the larger cities, a few in the rural districts. Statistician Carter of the State Board of Health, considers them dispensable.

Dr. Braken, of the Minnesota State Board of Health, also considers midwives dispensable and believes it feasible to abolish them. He says they do not practice in country districts, but only among crowded communities of foreigners.

Dr. G. H. Matson, of Ohio, says that midwives are still employed by foreigners, and not in rural districts. He believes it possible to abolish them.

Dr. St. Clair Drake, of the State Board of Health of Illinois, believes we cannot abolish them and that we should train them.

The subjoined was published in the Journal of the A. M. A.:

COUNTRY PRACTITIONERS PLEASE NOTICE

To the Editor: The undersigned, for the purposes of a paper on the midwife in question in America, is very anxious to get information relative to the number of midwives in the country (farming, lumber, mining) districts, in small villages and towns.

Would the doctors in such districts, villages. and towns kindly jot down on a postal card answers to the following questions and mail to me?

1. How many midwives practice in your vicinity?
2. Do you consider the midwives a necessity in your neighborhood?

Any other information will be gratefully received.

Fifty-one replies were received and I here again thank those physicians who took the trouble to answer the questions. The doctors write from the following States: Pennsylvania, Virginia, North Dakota, Illinois, Wyoming, Iowa, Arkansas, Ohio, Minnesota, Kentucky, Tennessee, Texas, Indiana, Wisconsin, Vermont, Missouri, Oklahoma, California, West Virginia, Utah, Alabama, Massachusetts, Washington.

Twenty-four doctors say there are no midwives in their vicinity. In El Paso, Texas, 20 to 40 practice among the Mexicans. In North Dakota midwives do not exist in the villages but do practice in the country. Dr. Dach, of Reeder, North Dakota, considers them a necessity as also does Dr. Ames, of Mt. Grove, Missouri, both because of the distances. Dr. Giannini, of Kettle Island, Kentucky, because of the mountainous country, also says they are needed. Of the 51, only 5 physicians say the midwife is necessary; 44 hold her entirely dispensable, two are doubtful. Most of these 44 practice in districts where it is many miles to the doctor and yet they find that they get along without midwives.

From these facts and opinions we may decide that rural districts get along without midwives very well, that these women do not exist in a larger part of the country. It may therefore be said that we do not have to train midwives to care for the rural districts. In the crowded communities, especially industrial centers employing foreigners speaking an alien language, the midwife thrives, but because she thrives we may not conclude she is indispensable. It is exactly in crowded communities that our substitute agencies are able to work with their greatest efficiency.

What has been done to take the midwife's place?

In the larger cities, Boston, New York, Philadelphia, Baltimore, Pittsburgh, Chicago, substitute agencies are supplanting her, and what is still more hopeful, even the poor foreigner is becoming enlightened as to the value of medical attendance and is demanding it. By supplying midwives we will keep these women longer in their ignorance. The Prenatal Clinics in Boston indicate the marvelous possibilities in this direction. To those unfamiliar with this work the articles by Dr. Arthur B. Emmons and Miss Mary Beard will prove highly illuminating.

What is being done in Boston is also done in other large cities and can be done in every city, town and village in this country. While the effort required to accomplish all this will be greater than that to give a few midwives a smattering of obstetric knowledge, the amount of good

attained will be immeasurably superior and what is more, it is a permanent improvement in obstetrics—real progress.

Since poverty is given as the cause for the perpetuation of the midwife let us see if there be not some way to eliminate poverty at least as far as childbirth is concerned.

The free maternity hospital will take a certain number—always small however, but still growing each year, as the demand among the people for experienced accoucheurs increases. The number of beds in hospitals for women of moderate means is also increasing rapidly. The free dispensaries—or out-clinics are now caring for a very large percentage of the cases. Accurate statistics are very hard to obtain. I would guess that in Chicago, about one-fifth of the births are cared for by institutions of the dispensary type.

The Peter Bent Brigham hospital allows $10.00 per case to young physicians.

Why not endowed accoucheurs as there are endowed visiting nurses? The city, the county, the state could well afford to subsidize the accoucheur, if private philanthropy did not assume the burden. Maternity insurance has been suggested, and, if sickness insurance comes into vogue—provision for the maternity case will surely be incorporated.

The visiting nurses do an immense amount of real good in maternity work. They provide a degree of prenatal care that is unrecognized in our journals. They get neighborhood physicians to attend the women during labot while they care for both mother and baby afterward.

There are thousands of young physicians, who would take cases, now cared for by midwives, were it not considered undignified work—and also undignified to accept such a small fee for the service.

In the mining and factory communities physicians employed by the companies can and do care for the wives of many of the workers. With all these agencies at work it is not an unattainable dream to furnish good obstetric care for all women. The midwife can be dispensed with, she *is* being gradually eliminated. I feel certain that if every midwife in America were to vanish today, before the week ends every woman in the United States would be cared for—and cared for much better than she is today.

III. *It is impossible to train the midwife sufficiently to make her a safe person to attend labor cases.* After what has been said it is superfluous to dilate on this point. Obstetrics is a major science. It requires the highest kind of skill in addition to much knowledge to do even tolerable work. The high class of work and superior knowledge required of the infant welfare nurses, the child saving societies, public health movements, all throw into relief the impossibility of training the midwife for any good purpose.

But all these arguments are unnecessary and insult one's intelligence.

Finally we have the experience of others. Europe has tried to educate

midwives for many centuries and has failed signally. Ekstein, of Teplitz, Austria, has been Chairman of the Midwife Committee of the German Gynecologic Society for years. He is editor of a Midwife's Annual. He calls the midwife situation in Austria and Germany a state of misery, and envies us our conditions here. I have visited many European clinics and I am convinced that the reason they are so far behind ours in the obstetric technique, is because of the presence of the midwife and the low ideal she establishes.

In Europe the midwife has more standing than she has in this country; the laws she must obey are stricter, they are enforced better than they could possibly be enforced here; she receives a two years' training in the best maternities under the world-famed professors; she has to take post-graduate courses every few years; she is under the direct supervision of the health physicians—and they supervise; and yet an authority on midwives calls the situation miserable!

If the medical profession fails to establish tolerable conditions in Germany, can we hope to succeed? And if we do succeed what have we accomplished? The answer to this question will be found in the foregoing.

I would refer to the paper of Emmons and Huntington, of Boston, read in Chicago four years ago. Their ideas are identical with mine.

I conclude. I am heart and soul opposed to any measure which is calculated to perpetuate the midwife. In educating her we assume the responsibility for her; we lower standards, we prostitute ideals, we compromise with wrong and I for one, refuse to be particeps criminis. We, for the lesser evil, lose the greater good.

Finally she is *not* a necessity. The rural districts are already getting along very well without her. The foreign population of the cities is being taken care of better every year and as their education improves will also learn to do without her.

7. *The Midwife in Massachusetts: Her Anomalous Position*

James Lincoln Huntington

The number of midwives existing in Massachusetts is about one hundred and fifty. Many of these women carry on a successful practice. In almost every section of the State there are manufacturing centres where midwives exist. And yet all this is contrary to the Medical Practice Act, for by a decision of the Supreme Court of Massachusetts this Act directly covers the case of the midwife receiving money for the attendance of women in childbirth. In spite of this law, however, the statute book today explicitly states that the fee of twenty-five cents shall be paid to every midwife reporting a birth to the city registrar or town clerk. This certainly is an anomaly! But because public sentiment is too ignorant and too feeble to enforce this law, are we to believe that the law is bad and needs modification? How can this law be modified so as to benefit the community? I maintain that no change in legislation in this regard can be of the slightest benefit to the Commonwealth of Massachusetts at the present time. The only change which must be made some time is to strike from the laws concerning the Reporting of Births the word "midwife," and the demand for such a change is not sufficiently great to make it advisable to bring before the Legislature the midwife question until the general public has been educated to realize the importance of obstetrics.

The change now proposed, however, is not to strengthen the Medical Practice Act, but to weaken it. The law as it now stands is a serious blot on the statutes of the State. Massachusetts is one of two States in the Union not requiring the degree of M.D., before the candidate is allowed to take the examination before the State Board of Registration in Medicine. Massachusetts further let down the bars last year and recognized the optometrists. If the midwives are now to be recognized we may fairly ask, where is it going to end?

The effect of recognizing the midwife would be dangerous in three ways.

First, in its influence upon the general public.

Source: James Lincoln Huntington, "The Midwife in Massachusetts: Her Anomalous Position," *Boston Medical and Surgical Journal*, 168 (March 1913), 418–421. Reprinted by permission of the *New England Journal of Medicine*.

There is probably no other branch of medicine about which so much ignorance exists in the lay mind as the subject of obstetrics. The average American, and immigrant, too, for that matter, realizes where to seek and how to find competent medical skill for the illnesses and emergencies that beset his path, but has no idea of the importance of adequate medical attention during pregnancy, labor and the puerperium. Since the child comes into existence and later into the world by natural processes in the vast majority of cases, the need of any intelligent supervision is not recognized. The deaths and invalidism resulting from incompetent care are not traced to their source.

In many families nothing is done until the advent of the child is imminent, and then the nearest doctor or midwife is summoned by the excited neighbor or husband, much as the fire department is called when the kitchen lamp is overturned. Any effort to introduce midwife legislation at the present day would probably meet with prompt support by the majority of our citizens who would have the feeling that the more persons available to render assistance in such emergencies the better, not realizing the vital importance of the quality of that service. Thus any effort at legislation would have an injurious effect upon the minds of the general public. It will definitely lessen the importance of proper obstetrical observation and care. They will argue (and with considerable reason) that if the State recognizes and endorses the midwife then she must be good enough for most people, and certainly if she isn't quite all that might be desired after her six months' training, why any physician after four years in the medical school must be all that the most anxious could wish for, and so with this sense of security they will call upon the general practitioner without any regard for his obstetrical training.

Second. The physician practicing medicine at the present time in Massachusetts will be seriously injured by admitting the midwife to legitimate practice. One class of practitioners will be greatly pleased and relieved if this comes about for it will immediately wash the hands of those who have been practicing in close relation with the midwives. It will show them that they have been acting wisely and well in signing birth certificates in cases they have never seen much less attended. It will make them realize even more fully that the stethoscope and the pelvimeter are no longer necessary in obstetrics. They will with their medical diploma, naturally feel superior to the midwife and will have no pressure brought to bear upon them to improve their obstetrical knowledge. Legalizing the midwife will also work a definite hardship to those physicians in the state who have become well trained in obstetrics, for it will have a definite tendency to decrease their sphere of usefulness. When the general public is informed by its body of law-

givers that any woman, after a six months' training is competent to take charge of an obstetrical case, the demand for the expert cannot easily be understood.

But the third and most important harm that this proposed law is capable of doing will be its effect upon the teaching of obstetrics. There is a very definite move on foot in America to strengthen the courses in obstetrics, to teach the students, by having them deliver not six cases but thirty, forty, or fifty under careful supervision during their medical school days—not only that but to teach them further that no man should consider himself competent to cope with the complications of pregnancy and labor until he has rounded out his course by an internship in a lying-in hospital. In other words, the modern tendency is to lift obstetrics to the level of medicine and surgery. There is less and less talk of the "normal case" so frequently spoken of by those in favor of the midwife as a practitioner. The trained obstetrician knows that no case is normal until it is over. At any moment complications are liable to arise capable of taxing the skill of the obstetrician to the utmost. In these emergencies time is a great factor and while often medical aid may be summoned in time to render service, in a certain definite number of cases, unless a trained man is within easy reach the resulting delay means certain death for infant or mother, sometimes both. This modern teaching of obstetrics is directly in accord with the principles of preventive medicine. The obstetrician, by his care of the pregnancy, tends to prevent miscarriage, premature delivery and toxemia, and by his preliminary examination, selects the operation that he may have to perform, to give the surest chance for a strong living infant and healthy mother. This the midwife obviously cannot do. She must, of necessity, be dependent upon the physician when trouble arises. Thus any logical method of developing a midwife system must include some definite standard of obstetrical ability on the part of the medical profession, else the midwife will call in vain for help.

If the midwife is to be trained, she must have that training in schools where she can be brought in contact with the patient in labor. At the present time Boston, while better off than many medical school centres, is not overequipped for teaching the students that come here for instruction in the out-patient departments of the different hospitals. Needless to say, any such considerable decrease in the number of cases as would follow the establishment of midwife schools, to say nothing of the activity of these graduates, must seriously injure the teaching facilities here in Boston.

Another phase of the effect of midwife practice on medical education must be considered. If it is true that fifty per cent of all the labors in this country are conducted by midwives, then it must also be certain

that the details of half the obstetrical cases of today are forever lost. The midwife contributes nothing to the knowledge of obstetrics.

The midwife exists only for the immigrant portions of our population. It is hard to see how she can make much progress among our native-born population. The physician exists for all classes and it is much more important to have the medical student receive the first consideration in any plans for education.

Let us see how the trained obstetrical teachers of America regard this question.

Williams, professor of obstetrics in Johns Hopkins, urges among other obstetrical reforms "Gradual abolition of midwives in large cities and their replacement by obstetrical charities. If midwives are to be educated, see that it is done in a broad sense and not in a make-shift way. Even then disappointment will probably follow."

De Lee, professor of obstetrics in Northwestern University Medical School writes, "When public opinion has been raised and educated regarding obstetrics the midwife question will solve itself. With an enlightened knowledge of the importance of obstetrical art, of its difficulties, of its high ideals, the midwife will disappear; she will have become intolerable and impossible."

Dr. Paul Titus of the Elizabeth S. Magee Infirmary of Pittsburgh, who was on the staff of Prof. Menge, writes, "I worked in the Frauenklinik in Heidelberg long enough to become thoroughly acquainted with midwife education and I feel that midwives educated or uneducated are unnecessary and vicious. Education improves their *obstetrical ability but very little* but it does do this one thing—it makes them dangerous abortionists since it gives them an idea as to the value of asepsis and thus makes them more successful in that criminal field, and in direct proportion to their success and sense of self-security increases their business in this respect."

Dr. Skeel of Cleveland writes, "If obstetrics has any right to a place with the other branches of medicine: if its correct practice requires the wide knowledge and the skilled technic of the educated physician: if modern science has placed it on a coordinate plane with surgery, pediatrics, etc., then the proper solution of the midwife problem is not her education but her elimination."

Davis, professor of obstetrics, Jefferson Medical College, Philadelphia, says, "It is my belief that midwives are a menace to the health of the community, an unnecessary evil and a nuisance. It is true that they furnish interesting pathologic cases, but this is no excuse for their existence."

Dr. J. R. Freeland, obstetrician to West Pennsylvania Hospital in Pittsburg; former assistant master Rotunda Hospital in Dublin, writes, "In

Great Britain, with 30,000,000 inhabitants, there are approximately 37,000 cases available annually for the instruction of midwives. The United States would need about 110,000 cases annually to train midwives to the standard required in Great Britain *which would still mean very unsatisfactory work*. The students would suffer and midwives would have to call as consultants men whose training in obstetrics had been much inferior to their own. Therefore it seems advisable to use the available material for the training of students, gradually raising the standard of obstetrics and by this means the elimination of the midwife would be only a matter of time."

Ziegler, professor of obstetrics in University of Pittsburgh, writes, "I am opposed to educating and licensing midwives to practice obstetrics in this country for several reasons; first, because I believe it unnecessary, since I am convinced that a plan can be evolved and practically carried out which will give to every child-bearing woman in the country competent medical attendance; and second, because I do not believe it possible to train women of the type of even the best of midwives to practice obstetrics satisfactorily."

We are not satisfied with the present situation here in Massachusetts or anxious to allow it to continue. We feel that there ought to be a tremendous campaign started in our medical schools, and in every city and town in Massachusetts where midwives exist or where obstetrics is practiced in a make-shift way. We believe that in every town or city equipped with a District or Visiting Nursing Association and with a hospital that could devote a few beds to this cause, the problem would be simple, effective and self-supporting. The factors in the complete scheme should be (1) a pregnancy clinic, (2) a social service worker, (3) the visiting nurse, (4) the hospital beds for the serious complication,—all these under the charge of the obstetrically trained physician. To this might be added handy women and wet nurse directories.

The patient applies to the pregnancy clinic, the family is visited by the Social Service worker and an estimate is made of what the patient should contribute to the support of the institution, or where poverty exists, what charity the patient needs. At the time of application the patient's history is taken, and physical examination made; the pelvis is measured and examined; the blood-pressure is taken and the urine tested, and if all is normal the patient is turned over to the visiting nurse, who makes monthly and later weekly visits, taking the blood pressure and doing the rough test for albumen, seeing that the patient is following out the directions for the hygiene of pregnancy as outlined for her at her initial visit. Should all progress normally, the obstetrically trained physician is summoned when the patient is in labor; this he conducts with the assistance of the nurse. The nurse makes the visits during the puerperium, reporting daily to the physician, and if all goes well the

patient is only seen by him when ready for discharge. That such a clinic could be run as a self-supporting institution seems certain, even the physician should in most cases receive some compensation for his time. In 1910 the out-patients of the Boston Lying-In Hospital, contributing on the average $1.28 per patient paid all the expense of the Out-Patient Department, with a surplus of $807.82. In 1911, with an average of $1.27 per patient, the Out-Patient Department turned over a surplus of $833.31. Certainly it would seem that this answered the question of the economic necessity for the midwife.

A recent writer on this subject has said: "We are totally indifferent as to what becomes of the midwife as compared with the vitally important question of how we shall provide competent medical service for the hundreds of thousands of the very best of our women while they are fulfilling the sacred obligations of maternity." I feel, however, that it would be perfectly possible to provide for the midwife and at the same time follow out our scheme for the Lying-In Dispensary. The midwives in the community should be informed that they can choose between giving up their livelihood or cooperating with the Dispensary, but that in either case they can no longer deliver women in labor. Then those midwives who show evidence of education and are able and willing to follow the aseptic precautions of the obstetrical nurse can be employed in that capacity by the Dispensary, while the others can in many cases be employed as handy women, going into the house and taking charge of the work and waiting upon the mother during her period of incapacity. Such a scheme could be developed in a community where the law was in the hands of men of sufficient education in this regard to see that the law was enforced.

It would seem as if we had reached that stage of social education where the rights of all should be recognized and respected. How can we with any justice suggest one class of service for the poor and ignorant and another for the well to do and educated? No other branch of medicine tolerates this dual standard—two classes of practitioners, one semi-trained and the other thoroughly educated. This is a problem to be solved by the obstetrically trained physicians and not by pediatricians, statisticians and board of health men unassisted by expert obstetrical advice. No man unless he is thoroughly trained in obstetrics is likely to realize the utter hopelessness of ever solving the obstetrical problem of the poor by the services of the midwife.

The course lies open. Massachusetts is in a position where public ignorance and apathy will readily allow the adoption of the midwife system—a system which has never proved successful in any country. But if we as obstetricians will firmly stand our ground and by exerting every effort educate the community in the importance of obstetrics, we can by the aid of our present law gradually solve the anomalous position

of the midwife and place Massachusetts at the forefront in the march of Preventive Medicine.

8. *The Midwife: Her Future in the United States*

Authur Brewster Emmons and James Lincoln Huntington

Your Committee has asked of us to answer three questions:

"Has the trained and supervised midwife made good?
"Shall midwives be licensed, and shall midwives be abolished?"

We have endeavored to follow closely the Committee's wording and have divided our paper into three parts, each part answering one of these questions.

We hope to show you in the following pages that the midwife never has and never can make good until she becomes a practising physician, thoroughly trained; that midwives should not be licensed save in those States where they are so numerous that they cannot be abolished at once, and concluding with the third question, by showing a system whereby the mothers of the future shall receive in their hours of greatest need the attention of men and women thoroughly grounded in obstetrics.

"Has the trained and supervised midwife made good?" In England the midwife has always done the brunt of obstetrics, save in the families of wealth and education. We find that the midwife was licensed until about 1810. During the nineteenth century she was, in the main, dirty and unscrupulous. Finally, such a condition was reached that popular sentiment demanded a change and the Midwife Bill was passed in 1902, in spite of medical opposition. This has given England a fairly well-trained cleanly midwife, in place of the dirty midwife and the careless practitioner, but it has not instituted a new system, and in the light of modern medicine, it is of questionable advantage to the community, for it provides a double system in obstetrics; the midwife but scantily trained, depending upon the physician who is not certain to respond to her call.

Let us see just what this means. Some 30,000 women have taken enough practice away from the physicians to obtain a livelihood. Unquestionably the field of the physician has been invaded and the community is the loser because this form of practitioner is a make-shift, admittedly incapable of coping with the abnormalities of pregnancy, labor and the puerperium.

Source: Arthur Brewster Emmons and James Lincoln Huntington, "The Midwife: Her Future in the United States," *American Journal of Obstetrics and the Diseases of Women and Children*, 65 (March 1912), 383–404.

The more midwives there are and the more successful they are, just so much the worse for the community at large which is thereby being supplied by second-class service. And this is more true in England than in America for the English system of medical education averages far higher than in the United States of America.

With such inadequate training, and such meager provision made for the supervision of the midwife, working out of harmony with a growing proportion of the medical profession, we can feel assured that the midwife in England has not made good when viewed in the light of the greatest benefit to the community as a whole.

Let us now turn to the continent of Europe to see how the question can be answered.

In practically the whole of Europe obstetrics has always been conducted by midwives and the system of training and regulation is much the same in all these countries, certainly the differences between the midwife in Italy, France, Austria and Germany are very slight indeed. As we have had the opportunity to study thoroughly the question in Germany let us take up the situation there in detail, and see the exact position of the German midwife. We feel that a study of her position will show not only the breadth and thoroughness of her training before she is allowed to assume definite responsibility, but also the complicated and complete supervision regarded as essential according to German ideals. Such a study we feel will show us what preparations we must be ready and able to make should we decide to adopt a system with the midwife as the solution of our present condition and also what results we may fairly expect to obtain from such a system.

In Germany practically all the normal obstetrics both in and out of the kliniks is conducted by midwives. To be sure, an increasing number of persons are by the process of education and cultivation appealing to the physician for at least his supervision at such a trying time. In Germany all classes are represented in the schools for midwives from the professor's daughter to the simplest peasant girl.

We must realize that Germany has been training midwives for generations, to understand her hold upon the general public. The trained midwife followed as naturally in the course of development as the trained physician, and we find with the knowledge of the necessity of clean obstetrics, stringent laws were passed for her education and regulation.

The German midwife of to-day is trained in the government kliniks by university professors who are salaried by the state, the same professors in the main as those who are responsible for the training of the medical students. In most cases the midwife course is six months, all of which time she lives in the hospital where she is trained. Her text-book is issued by the government and constantly revised so as to be up to date. This she must know almost by heart from cover to cover. This

book treats of anatomy, including the entire skeleton: the nervous, alimentary, and circulatory systems as well as the genitourinary tract. There is also considerable physiology and bacteriology as well as normal and pathological obstetrics. Besides this there is a statement of her legal status. This book is supplemented by lectures and explained by recitations occupying in all about twelve hours a week throughout the course.

She also has thorough drill in the principles of the diagnosis by means of abdominal palpation, auscultation, pelvimetry and vaginal examination. She has almost daily drill in the "vaginal touch" by means of the mannikin and the fetal cadaver.

She is taught the most essential tests for the examination of the urine. She is required to make vaginal examinations and to deliver a certain number of cases in the confinement wards under the direction of the resident physicians and graduate midwives. Here also she is taught—as far as is possible in the limited time of her instruction—the principles of aseptic technic.

At the conclusion of the course the midwife must pass a rigid examination both oral and written on the subjects she has pursued. Besides answering questions for some fifteen minutes, the candidate must demonstrate her knowledge by making a diagnosis of presentation and position in the mannikin, outlining her methods of procedure in the given case. As we were present at such an examination we can definitely state that it is a thorough and severe test of the candidate's knowledge of the subjects—it is one that the average graduate of an American medical school would have difficulty in passing with distinction.

Now let us turn to the midwife in practice and see what her position is. She is constantly under the supervision of a physician in the government service whose duties are in a measure the same as our medical examiner plus many of those of a Board of Health officer.

To this officer the midwife must report before she enters upon her practice in the given locality; he examines her credentials and establishes her in practice and so long as she remains in his jurisdiction her work is constantly subjected to his supervision. To him she must report immediately all still births and deaths, all cases of puerperal fever and ophthalmia neonatorum. Her home, her equipment, her clothing and her person must always be ready for his inspection. She may lose her right to practice if her house is dirty or if she is caring for an obstetrical case under her own roof. The contents of her bag and her case book are outlined by law. She is required to wear clean and washable gowns when in attendance on cases. Her hands must be clean and the skin and nails in good condition at all times. She must report to this officer any septic lesion or ulcer on any part of her body. Violations of these rules will lead to swift punishment—fine or imprisonment, or both.

The midwife must also report immediately to some local physician

any symptoms suggesting eclampsia or miscarriage or any serious complication of pregnancy.

She must be equally prompt in reporting any case of antepartum hemorrhage, contracted pelvis, or abnormal presentation—and this includes a breech presentation. Should the second stage last more than two hours without progress; the pulse or temperature rise above the limit considered not abnormal in obstetrics; the fetal heart rise above 180 or fall below 110; the placenta remain in the uterus too long after delivery; the uterus fail to contract and continue to bleed; or the perineum rupture during delivery, the midwife in each and every instance must notify a physician in writing of the exact condition or communicate with him personally over the telephone. And the physician must in such a case respond at once unless actually engaged on a case that requires his immediate attention when he must so communicate to the midwife or the messenger. Should the midwife or the physician fail to obey these laws they are held liable to punishment.

In case an emergency arises where time is of utmost importance and her powers are limited by law from doing what she knows to be necessary, after notifying the physician, or even before if the emergency demands, it shall be her duty to do whatever seems necessary for her to perform—save only version and instrumental obstetrics—but in each and every instance she must communicate as soon as possible with the medical examiner, telling him the exact circumstances and abiding by his decision as to whether or not her action was justified.

This gives a rough picture of the duties and responsibilities of the German midwife and the careful supervision exercised over her. Added to all this she must return every few years for re-examination after a few days' residence in the klinik so that she will keep up to date.

But let us see if the midwife in practice lives up to all this. In the first place, one observing the work of the midwife in the confinement ward is struck by her lack of what is known as the "aseptic conscience"; that is, the knowledge that one is or is not surgically clean. After faithfully scrubbing her hands for the alloted fifteen minutes, the midwife will unconsciously touch something outside of the sterile field and continue as if surgically clean. This the writers have often observed. Of course there are exceptional pupil midwives who do not fall into this error and these are usually the ones who have graduated as nurses before beginning the training in the midwife school.

But one cannot help feeling that if these breaks in aseptic technic are made in the hospital where the pupil is working under vigilant instructors how much more apt she will be to fall into unsurgical habits while working in a peasant's home. This carelessness is even more marked in the older midwives when they return for instruction.

Obstetricians in Germany are far from satisfied with the present sys-

tem. They admit it is illogical but it is so firmly established it seems impossible to make a change. Puerperal fever is much more prevalent than should be. Prof. Bumm so states in his "Text-book on Obstetrics," in one year out of 2,000,000 births 5,000 deaths from puerperal fever were reported and of course many more failed to be accurately reported.

A year or so ago a Berlin physician, prominent in gynecology, wrote to a committee of the American Medical Association asking for information in regard to the number of deaths from puerperal fever in this country, as he understood that we were without midwives. The answer was made that not only were we without vital statistics of any value, but that we were in many states overrun with midwives. The Department of Medical Economics of the *Jour. of the A.M.A.*, referring to this correspondence adds "Midwifery is not so well regulated in this country as in Europe, and yet the harm done is probably less since midwives are not so numerous."

We have in Germany a system of training and regulation of the midwife so complete as to be almost ideal, a system of seemingly perfect harmony between the midwife and physician. But let us look a little closer at this very point and we will see why the thoughtful German obstetrician is dissatisfied with the present scheme.

There are rules for harmony laid down in the statute book, but the midwife is not well paid and it is profitable for her to deliver the case if possible without calling in the physician so she is all too apt to let the cases go as long as seems safe without her falling into the clutches of the law. Then too the physician when called to such a case is far from being as careful as if it had been his case from the beginning, for it is so easy to say that had he been called earlier all would have been well. The obstetrician cannot give his best care to a case under such circumstances. Then there is the other great defect in the system that unlike any other branch of medicine there are two standards of excellence offered to the public.

Thus we see instead of perfect harmony a waste of precious minutes because of greed and ignorance; divided responsibility because of the nature of the system and also because of jealousy; and two standards of skill where science and logic demand but one. And so even on the continent where ages have given the midwife an established position yet the leading obstetricians will tell you that the midwife has not made good.

It is almost absurd to ask the question: "Has the trained and supervised midwife made good in America?" We have never had a system of training of midwives worthy of the name; neither have we had any successful method of regulation, with the single possible exception of New York City. The fact is, the midwife is not a native product of America. They have always been here, but only incidentally, and only because America

has always been receiving generous importations of immigrants from the Continent of Europe. We have never adopted in any State a system of obstetrics with the midwife as the working unit. It has almost been a rule, that the more immigrants arriving in a locality, the more midwives will flourish there, but as soon as the immigrant is assimilated, and becomes part of our civilization, then the midwife is no longer a factor in his home.

"*Shall Midwives be Licensed?*"—We suggest the following as a brief and fair summary of the minimum training which may be ordinarily demanded to-day of those who are to assume the care of the expectant mother. Ability to make a diagnosis of pregnancy, and to determine whether the bony development of the mother, is normal enough to make labor a safe procedure; knowledge of how to examine the urine and to test the blood pressure of the pregnant woman, so as to receive the first warning of threatened eclampsia. Ability to conduct a normal case of labor, and this is first of all asepsis—not only the theory, but the trained instinct of surgical cleanliness, and how it can be maintained. Ability to make the internal examination. A knowledge of anesthetics, ability to properly care for the breasts, to supervise the nursing and proper hygiene of the infant. In the light of modern medicine, we know these are the simplest requirements and the right of every mother in civilized communities, but as we read through this list, how many teachers of obstetrics would care to undertake the training of the midwife, as we have seen her in the city slums? How many would care to feel the responsibility for her work in practice?

The story of medical education in this country is not the story of complete success. We have made ourselves the jest of scientists throughout the rest of the world, by our lack of a uniformly high standard. Until we have solved the problem of how *not* to produce incompetent physicians, let us not complicate the problem by attempting to properly train a new class of practitioners. The opportunities for clinical instruction in our large cities are all too few to properly train our nurses and our doctors. How can we, for an instant, consider the training of the midwife as well?

The midwife is called in question to-day not because of the popular demand for her services, but because investigation into disease and death, has revealed her working in her filthy surroundings, and has shocked the medical and lay public into action.

The midwife is willing to undertake maternity work that no well-trained obstetrical nurse would think of attempting because in the first place she is ignorant of the situation; she has the over-confidence of half-knowledge; she is usually unprincipled, and callous of the feelings and welfare of her patients, and anxious only for her fee. She looks

upon her work as a legitimate form of livelihood, not as an ennobling profession.

But let us look at the picture from another standpoint; and consider that the midwife is licensed. The question of regulation is one that goes hand in hand with the licensing power. We can take it for granted that all will agree that the licensed midwife must be regulated. How is that to be done? The obvious answer is by legislation, but we know by experience that in America legislation without public sentiment behind the law is absolutely futile.

Let us suppose for the sake of argument that the impossible has been accomplished—that we have an aroused community and laws as stringent as those of Germany, for the regulation of the midwife. We must realize that it means in each community inspectors trained in medicine and paid by the Government to give their exclusive time to supervising the midwife, and not only that, but a medical profession forced by law to respond to the call of the midwife in trouble. Do you honestly think for one moment that we could accomplish this in America? But let us again grant all this as possible, and consider whether it would be worth while; by gradual steps we should have evolved a double system of obstetrics enforced by the law through well-trained medical officers and backed by popular sentiment. Would it be a success? We answer, "No!" It would be a double system—two standards of excellence which can never work together, and yet based on the assumption that they are interlocking parts of the same machine. Why should we adopt in obstetrics this double system? Certainly, there can be no more important branch of medicine than this, and yet with the possible exception of ophthalmology, we have no attempt in any field of medicine to adopt a double system of practitioners. Why should we not oppose the midwife on the same ground that we oppose the optometrist; both, because of their limited training, are incompetent to bear the responsibilities they attempt to assume, and whereas the worst the optometrist is likely to do is to subject his victim to financial loss and injure his eyesight, the midwife can and has, by her ignorance alone, cost the community the loss of two lives, and has not only escaped any punishment, but has been rewarded by a fee for her activities. And when we picture the unnecessary and enduring sorrow her ignorance has caused, we should think well before we put such power in her hands.

"*Shall the Midwife be Abolished?*"—We feel that this question should be answered emphatically in the affirmative when and where it is possible. We feel that in this position we are but keeping step with progress in preventative medicine and following out the logical solution of what is best and safest. But we go further and feel certain that the untrained and unscrupulous physician should be put in the same class with the

midwife and laid aside as soon as is possible by guarded legislation and education of the public conscience. We are not satisfied with generalities. We feel that sweeping condemnation is not enough to bring about a change of any value. Let us not fall into such an error but show definitely and in detail just exactly how these much-needed reforms can be made. If our remarks seem didactic in dealing with conditions outside of our own state among surroundings we know little of—pardon us, we mean no possible offense. We are dealing with a problem about which it is next to impossible to know the details and the facts except at first hand.

To begin with let us show you the condition in Massachusetts and what we feel to be of vital importance in our State. By the medical practice law midwives are excluded from the practice of obstetrics. They have been found violating the law and in two or three instances have been caught and convicted and have paid fines for practising medicine without a license. In spite of this some hundred and fifty women are practising as midwives. They are for the most part poorly trained and incompetent women. Their stronghold is in the manufacturing cities of about 100,000 population largely composed of immigrants. There are a few midwives in Boston but their practice is small. We feel that in Massachusetts under such favorable circumstances that the State and local medical societies should see to it that the law plainly written on the statute books be enforced and at the same time by the extension of dispensary systems provide for the immigrant population.

In States where the midwife is practically unknown see that the medical practice law excludes the possibility of midwives practising within the limits of the State.

In States where the midwives are active but not numerous or well organized, license and regulate those in practice; outline for them the minimum standard for their cases and enforce at least this by taking away the licenses of those who violate the law. Renew the licenses every year and issue no new ones. Then the midwives will gradually be excluded from practice by their own incompetency and by the lapse of time. At the same time earnest endeavors must be made to provide competent obstetric care for the impecunious.

In States now overrun with midwives the task is harder but we think neither discouraging nor impossible. Have a thorough system of examination given in German, French and Italian and enough midwives will be able to pass such an examination to care for those who will only be satisfied with the obstetrics of the midwife. Then by inspection keep these women up to the highest standard they are capable of pursuing. Only allow those to practice who can pass this examination and have the examination and the license to practice an annual affair. Then by gradually raising the standard and by providing dispensary care for all who will apply, the problem in a few years would simplify itself. Of

course this is with the understanding that the schools for midwives which have been proven on inspection to be merely diploma mills be abolished and the midwives drawn to supply the demand from the graduates of the continental schools—institutions with which we can never hope to compete.

We wish to present to you in detail two successful systems for providing obstetrical care for the poor of our cities. We offer these two not as better than other institutions elsewhere in the country, but merely to present the working plan of a system that can be applied with modification to any surroundings.

We first wish to show you the working of the Boston Lying-In Hospital, which last year cared for the confinement of 829 women in its wards, and 2,007 women in their own homes.

The patients are supervised in a pregnancy clinic, from the date of application, as soon as the condition is diagnosed until they fall in labor. The pregnancy clinic established May, 1911, is supervised by a corps of obstetricians who are assisted by the house officers and nurses in carrying out the work. When the patient falls in labor, she is either delivered in the wards of the hospital, or in her own home, depending on the nature of her case, her place of residence, her inclination, and to a lesser degree, her ability to pay. If she is confined at her home, she is attended by a student externe. These student externes are for the most part undergraduates of the Harvard Medical School or post-graduate students from other institutions. How successfully this has worked out can best be shown by the statement that during the past year these 2,007 patients voluntarily contributed to the support of the hospital the sum of $2,571, and the total expenses of the out-patient department were $1,763.18, leaving a net gain of $807.82.

We feel that some such scheme as this can be carried out in every medical center, where medical schools are near at hand. In the smaller cities, away from medical schools, the young doctor, the visiting nurse association, and a few beds in a hospital, give a very excellent substitute for this more elaborate system. Let us look at such an institution at work. The city of Manchester, New Hampshire, has 70,000 inhabitants, including a large foreign population. In a central location is the building of the City Mission. Application is made to this institution by those unable to employ physicians. The home is visited, the need determined, and the district nurse is called in. About 150 obstetric cases are cared for annually. These are attended during confinement by the young physicians of the city who are members of the local medical society, and have signified their desire to be on call for obstetrical cases among the poor for two months each year, thus the young practitioner gains experience, and may even acquire patients for his future practice. For those cases which present complications, which cannot be properly dealt with

in the patient's own home, there are three beds in the local hospital at the disposal of the City Mission. This institution is supported by public subscription, including donations from the various mill owners and manufacturers of the town, and the various women's clubs of the churches. Such a plan it will be seen includes the social worker, the district nurse and the physician. To this is added possible hospital care in critical cases.

This system is efficient, economical and has proven satisfactory by years of service. We see no reason why it cannot be applied with modification in the smaller cities.

CONCLUSION

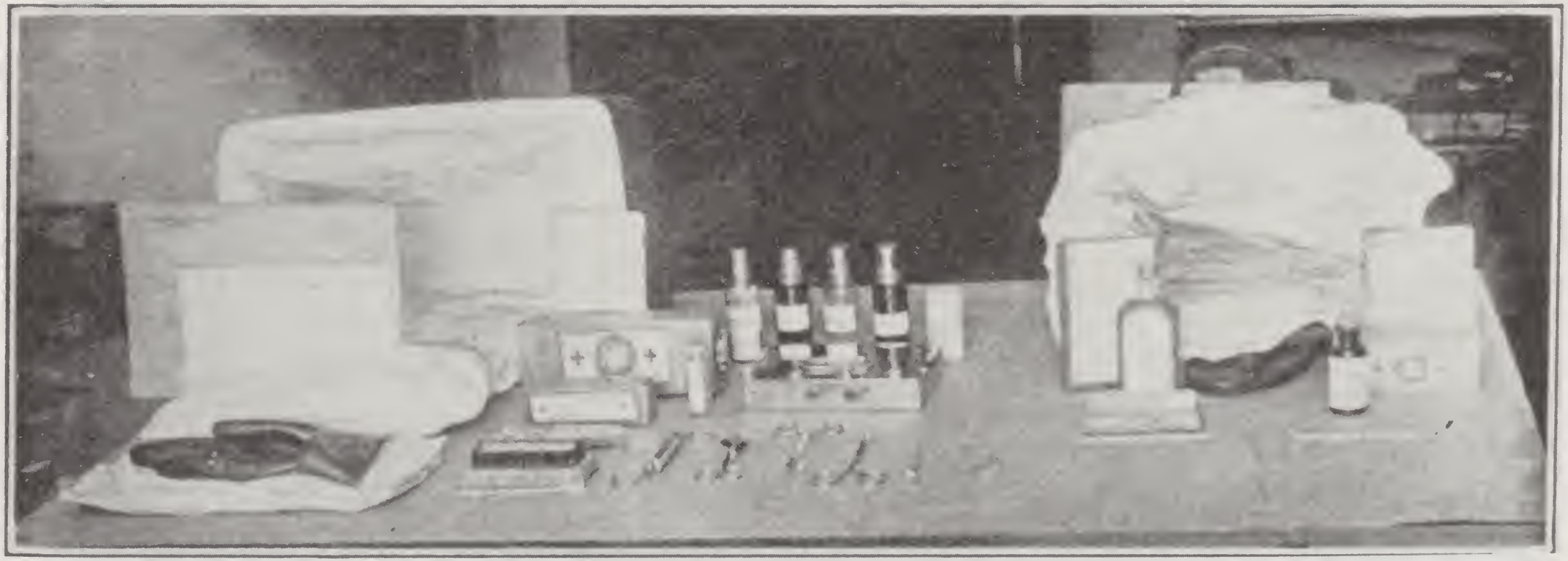
The object of the meeting of this section of our National Society we believe to be to fully consider the facts presented concerning midwives in general and the midwife in America in particular. From this consideration we should eventually draw conclusions and lay out a policy national in scope. Were such a policy accepted by the several states, each separate community must consider local conditions, opportunities and resources and apply the principles of such a policy as far as is possible to meet these given conditions. We all should return to our separate homes determined to carry out the plan which will finally give our community the best system of obstetric care which is practicable under the circumstances.

So let us be far-sighted in our plans and produce a policy nation-wide in scope and yet plastic enough to be shaped to the needs of each and every community. And let it all tend toward that goal for which we must all sooner or later strive, a single standard of obstetrical excellence, at the disposal of all, rich and poor alike. A standard which only takes into consideration the best possible, immediate, attention for the welfare of "All women in the perils of childbirth."

1. **Francesca Squadrito Macchia**, an Italian midwife, immigrated to the United States from Sicily around 1905. After apprenticing with her mother, she established her own midwifery practice in Boston's North End. Her earnings as a midwife were sufficient to enable her to put her two sons through medical school, one of whom took over her practice in the 1930s. (Courtesy of Joseph A. Ilacqua)

2. Midwives gathered at a regular monthly meeting of the Essex County, New Jersey, Midwives' Association, 1929. Public health officials in New Jersey played a leading role in the early twentieth-century effort to train and supervise midwives. (Courtesy of New Jersey State Library)

3. New Jersey midwives, most of whom were recently arrived immigrants from southern and eastern Europe, in attendance at a special midwifery conference held at Jersey City Hospital, May 1929. (Courtesy of New Jersey State Library)



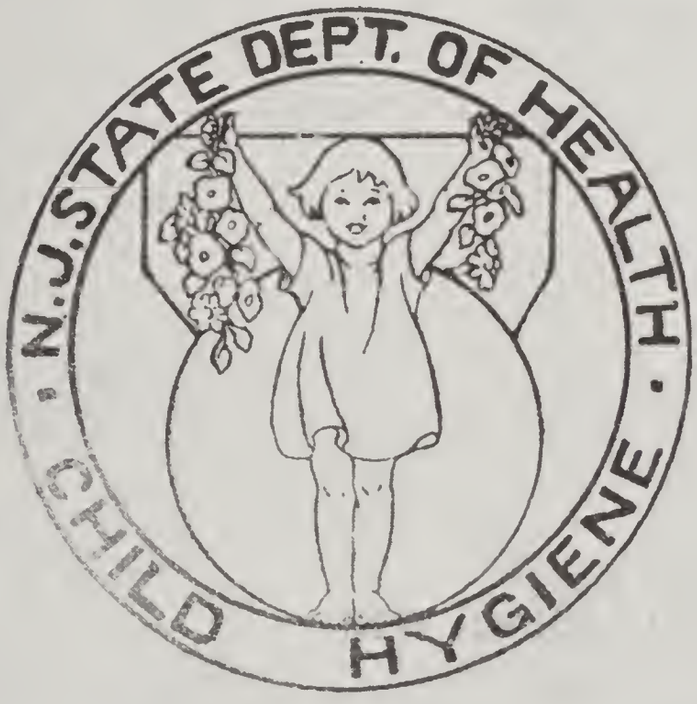
4. Standard bag and equipment carried by trained and supervised midwives of New Jersey, ca. 1929
(Courtesy of New Jersey State Library)

5. Sibby Kelly, a former slave and one of the last midwives in Petersville, Georgia. She died about 1934. As many as 90 percent of all black births were attended by midwives during the first three decades of the twentieth century. (Courtesy of Georgia Department of Archives and History)

6. Class of Georgia midwives, ca. 1926. The Georgia State Board of Health began regulating midwifery during the 1920s. (Courtesy of Georgia Department of Archives and History)

7. **Class of midwives from Coweta County, Georgia, 1931** (Courtesy of Georgia Department of Archives and History)

NEW JERSEY STATE DEPARTMENT OF HEALTH
Bureau of Child Hygiene
Trenton, N. J.
November 1st. 1927



"The Progressive Midwife"

A Quarterly Bulletin

Special Subjects

MIDWIFERY COURSE IN JERSEY CITY HOSPITAL
MATERNAL NURSING (continued)
THE CARE OF BABIES EYES
ETHICS FOR MIDWIVES

8. **Original cover of "The Progressive Midwife"** (Courtesy of New Jersey State Library)

IV

The Midwife as "Necessary Evil"

Not all physicians took as uncompromising a position against midwifery as those whose opinions were discussed in the previous chapter. A sizable portion of the medical profession, recognizing the impracticability of immediately eliminating the midwife, reluctantly conceded that she would probably be a "necessary evil" for many years to come. The two selections included in this chapter help to clarify and illuminate this position.

The first selection, "The Education, Licensing and Supervision of the Midwife," by the New York City obstetrician, J. Clifton Edgar, was originally presented as a paper to the 1915 annual meeting of the American Association for the Study and Prevention of Infant Mortality. The following year, the paper was reprinted in the March issue of the *American Journal of Obstetrics and the Diseases of Women and Children*. Noting that the "evil for the moment cannot be eradicated," Edgar called for strict regulation, supervision, and control of the midwife. Yet he made it clear that the purpose of such a program would be to weed out the "unfit and even mediocre practitioners," thereby paving the way for the midwife's "ultimate elimination."

As a New York City obstetrician, Edgar was keenly aware of the problems associated with urban, immigrant midwifery. He was confident, however, that urban midwives could eventually be replaced by better trained physicians and the marked extension of maternity hospitals and out-patient clinics. In the meantime, he supported the establishment of training programs for midwives such as the one offered by the Bellevue School for Midwives in New York. The Bellevue School, founded in 1911, was the first and only municipally sponsored school

for midwives established in the United States. Edgar's article contains some very valuable information about the first four years of work of the Bellevue School.

The second selection, "The Midwife Problem," written by E. R. Hardin, a North Carolina physician, and published in the *Southern Medical Journal* in 1925, focuses on the southern black, rural midwife and the need to bring about her gradual elmination. Drawing verbatim from the arguments presented by J. Clifton Edgar a decade earlier, Hardin concurred with the view that strict regulation should have as its ultimate goal the gradual abolishment of midwifery. He was adamantly opposed to any type of educational and training program that might enable the midwife to "become a fixed element in our social and economic system."

At the same time, Hardin acknowledged that it would be unwise to call for the immeditate abolishment of the southern midwife. While the extension of maternity hospitals and dispensaries might solve the urban "midwife problem," he recognized the difficulties in providing the many remote areas of the rural south with this type of service. Although Hardin offered no solution to this dilemma, he believed it was the responsibility of southern physicians to aid in the training and supervision of midwives until this problem was resolved. However, Hardin never waivered from the position that the ultimate solution of the "midwife problem" was to provide competent obstetric care to all childbearing women.

9. *The Education, Licensing and Supervision of the Midwife*

J. Clifton Edgar

The problems emanating from the consideration of the education, licensing and supervision or of the eventual elimination of the midwife have in the past few years attracted much attention, and are undoubtedly closely allied to the study and prevention of infant mortality, as well as maternal mortality and morbidity.

The time has come when the problem of the midwife in this country must be reckoned with.

In the past the responsibility for the midwife has been entirely ignored or assumed in a half-hearted manner in isolated instances.

Papers have been prepared and read upon the subject, indeed several notable ones before this Association; medical societies have discussed the problem; resolutions have been adopted and committees on ways and means appointed.

It is a deplorable fact that little of a practicable nature has been accomplished.

Broadly speaking, three standpoints are taken in this country. First, the midwife must be abolished. Second, the midwife should be ignored and left to her own devices. Third, the midwife should be raised to a higher plane by proper education and state control.

The first proposition is in my belief impossible, until there is some better substitute for the midwife; the second is unworthy of consideration; the third is at present the only practical way of dealing with the midwife problem, whether it has for its object solely the temporary safeguarding of helpless women and children, or a more far-reaching aim—namely, the final elimination of all but educated midwives.

To-day an anomalous condition exists in this country. On the one hand physicians, and even trained nurses, before they are permitted to enter upon the practice of their profession, are required to receive several years' instruction in the care and treatment of the sick, as well as special instruction in the care and treatment of child-bearing women and newborn infants.

On the other hand, although about 40 per cent. of the confinements

Source: J. Clifton Edgar, "The Education, Licensing and Supervision of the Midwife," *American Journal of Obstetrics and the Diseases of Women and Children*, 73 (March 1916), 385–398.

in this country are cared for by midwives, these same midwives are, except in rare instances, ignorant, untrained, incompetent women, and some of the results of their obstetric incompetence are, unnecessary deaths and blindness of the infants, and avoidable invalidism, suffering and death of the mother.

The elimination of the midwife at present is an impossibility, her ultimate elimination is an open question.

The consensus of opinion points to the truth of this statement; and this was the belief of this association, as brought out at its Second Annual Conference held in Baltimore, 1910.

Since the evil for the moment cannot be eradicated, the danger to the public can be minimized by some provision for the proper regulation, supervision and control of the midwife by the state and for her training to do her work in a cleanly and intelligent manner.

The argument, from time to time, has been advanced, that the so-called trained midwife is a safer obstetric attendant than some of the newly graduated physicians from our medical colleges.

In the past this was undoubtedly true in many instances, is even true to a less degree to-day.

The statement, that in some localities the midwife has fewer cases of puerperal infection in her practice than the physicians in the same locality, is, if true, no argument in favor of the midwife, but rather for the raising of the standard of medical education.

Even if we to-day admit, as this Association was told four years ago, that the midwife with all her faults is not responsible for as many deaths as the ignorant doctor who refuses to recognize his limitations, this admission on our part is still no excuse for the existence of the midwife, but a call for a higher medical standard in our medical schools, especially in obstetric teaching. This ideal medical standard is being rapidly put into practice, so that in the coming generation of medical men, no such comparison with the midwife will be possible.

The most satisfactory way to abolish the more objectionable part of the midwife problem is to recognize the midwife, place her under control, and state educational requirements, and to elevate these latter to such a height that only intelligent midwives shall remain to practise.

Somewhat similar measures have recently accomplished much for medicine in this country. Witness the fewer medical schools, fewer and better medical men graduates from the schools, and a general uplift along all medical lines. In the United States during 1913, as compared with 1912, the medical schools were decreased by fourteen, the students 1200, and the graduates in medicine by 500.

One cannot but be optimistic as regards the future of medical education. The work in the uplifting of the standard of Medical Education, begun and carried forward by the American Medical Association, and

recently strengthened by the American College of Surgeons, will gradually, but surely, eliminate the incompetent medical man.

Without in the slightest degree belittling the importance of the education, licensing and supervision of midwives, let us, in all our endeavor along these lines, ever aim at the ultimate elimination of the midwife.

In the Third Annual Meeting of this Association, in 1911, the question of "The Elimination of the Midwife" was ably presented.

Quite recently again, indeed within the past few weeks, Doctor Ziegler, the reader of the foregoing paper, thus expresses himself:

"Any scheme for improvement in obstetric teaching and practice which does not contemplate the ultimate elimination of the midwife will not succeed.

"This not alone because midwives can never be taught to practise obstetrics successfully, but most especially because of the moral effect upon obstetric standards."

It is quite within the bounds of possibility that the extension of maternity hospitals as well as further development and increase of our outdoor maternity services will in time render the existence of the midwife unnecessary.

A rough estimate, recently made of the number of patients cared for by maternity hospitals and dispensaries in the Borough of Manhattan, alone shows that about 10,000 were last year confined in maternity hospitals as charity patients and 7000 in their own homes, a total of 17,000 free confinements.

A study of birth returns for the City of New York during the past ten years is instructive. For 1905, 1906, 1907, 1908, the percentage of births reported by midwives is about the same, namely, in the neighborhood of 43 per cent. But in the past six years there has been a gradual but persistent decline in the births reported by midwives until in 1914 it reaches 37.6 per cent., as is shown by the following table:

CITY OF NEW YORK, BIRTHS REPORTED

1905	Physicians	60,051	
	Midwives	43,830	42.1 per cent.
1906	Physicians	63,661	
	Midwives	48,111	43.0 per cent.
1907	Physicians	68,186	
	Midwives	52,536	43.5 per cent.
1908	Physicians	71,210	
	Midwives	55,652	43.8 per cent.
1909	Physicians	73,359	
	Midwives	49,616	40.3 per cent.

1910	Physicians	77,071	
	Midwives	52,010	40.2 per cent.
1911	Physicians	82,788	
	Midwives	51,756	38.4 per cent.
1912	Physicians	82,390	
	Midwives	53,265	39.2 per cent.
1913	Physicians	83,770	
	Midwives	51,364	38.0 per cent.
1914	Physicians	87,650	
	Midwives	52,997	37.6 per cent.

How readily a maternity dispensary service is built up is well illustrated in our experience with the Bellevue School for Midwives. We started our school upon August 1, 1911. In the five months from that date to January 1, 1912, the school cared for fifty-four confinements in its hospital building and six in the surrounding tenements.

In the year from January, 1912 to January, 1913, it cared for 185 patients in the school, and 131 in the tenements, and in the year from January, 1914 to January, 1915, 307 in the school and 630 in the tenements.

But this solution of the problem is not so simple as it at first sight appears.

As has been recently pointed out, the immigrant woman employs a midwife, not only because she is cheaper than a doctor, but because the patient prefers a midwife to a doctor, who is a man.

The number of women among the foreign-born population, who employ a midwife because she is a woman and not a man, in New York is very large. Be the number large or small, the recent movement to encourage graduate nurses from our training schools to fit themselves for obstetric work not only in the city tenements, but in the rural districts, would meet this objection.

It is planned to offer a course of midwifery this autumn in the Washington University Hospital in St. Louis, open only to graduate nurses and offered for the purpose of increasing their equipment to do rural visiting nursing.

There is the woman who employs a midwife because she is cheaper than the doctor; and second, the woman, usually in our experience of the new immigrant class, who secures the services of the midwife because she prefers a woman "doctor" to a man doctor. Moreover, an advantage to the patient, of the midwife over the doctor, which never must be lost sight of in any plan for the elimination of the midwife, rests in the fact, that the midwife not merely delivers the woman, but

often bathes the mother and baby, cares for the other children of the household, and frequently acts as housekeeper and cook as well.

Our observation points to the fact, that while newly arrived immigrants often seek the services of midwives in their first confinements, they later apply to maternity hospitals, or outdoor maternity services for their subsequent labors. Innumerable hospital records are available to illustrate this fact.

The elimination of the midwife as such need not necessarily cause any great hardship, for most of the better class of midwives now in existence could subsequently find a livelihood, should they wish it, in caring for the older children and the household during the mother's two week absence in a maternity hospital, or during the time the mother is confined to her bed in her own home under the care of a dispensary physician. It would be quite feasible that the one-time midwife will act as a moderate-priced obstetric nurse under the last condition. Indeed, it is not uncommon for licensed midwives to apply to the training school for nurses of some of the smaller New York hospitals for admission to the course of training for nurses.

It is most unfortunate, that for those women who can and wish to pay for their confinement in a maternity hospital, there are very few moderate-priced private rooms in our New York hospitals available for such patients.

EDUCATION

The gist of the matter is, that since, for the moment, the midwife cannot be eliminated, she must be educated, licensed and supervised.

The licensing and supervision present no insurmountable obstacles, but the education of material, such as offers itself in New York City, is a much more difficult problem.

The countries of the Old World have faced this problem and solved it with greater or lesser success.

Most of us are familiar with the training of the German midwife, and it may not be generally known, as Miss Alice Gregory of the National Training School for Midwives in England has pointed out, that Holland, Belgium, France and Italy give a full two years' training to their midwives; and Norway, Sweden and Denmark, one year.

England faced this problem and solved it as late only as 1902, by the establishment of the Central Midwives Board by an Act of Parliament entitled "An Act to Secure the Better Training of Midwives and to Regulate their Practice."

Miss Caroline C. Van Blarcom, secretary of the New York Committee for the Prevention of Blindness, has studied at first hand the details of the English methods and described it in a report entitled "The Midwife

in England—Being a Study of the Working of the English Midwives Act of 1902" (1913).

The success in any branch of education rests largely in the material with which we have to deal.

Miss Crowell's graphic accounts of the character of the midwife in New York City, in 1906, show that of the 500 midwives personally interviewed, less than 10 per cent. could be classified as capable, reliable midwives; the rest were hopelessly dirty, ignorant and incompetent. Over 90 per cent. in New York City hopelessly dirty, ignorant and incompetent. So much for their characteristics.

The education of previously ignorant and untrained women to be midwives in courses of three, six or twelve months' instruction is an impossibilty.

A graduate nurse, from a training school in good standing, can undoubtedly be trained in six months or less, to become a safe and efficient attendant upon cases of normal labor, and could be depended upon to realize her own limitations and seek professional aid, should danger threaten or occur.

The possibility, on the other hand, of educating a woman, previously ignorant of all medical matters to become an efficient midwife in one or even two years, is an open question.

However disheartening the outlook, an attempt to educate the midwife has to be made, and a modest attempt in this direction was begun some four years ago, on August 1, 1911, when the Bellevue Midwife School opened its doors.

It is the first wedge, a beginning, and the only school of its kind in this country.

It is my great pleasure in this connection, to refer to an interesting, historical coincidence. Less than half a century ago, there was opened at Bellevue Hospital in New York City, the first training school for nurses in this country, based on the Nightingale plan. The establishment of this school was due solely to the vision of Miss Louisa Lee Schuyler, who formed the committee, which subsequently organized the training school.

The same mind, which conceived the importance of introducing in this country courses of training to fit honorable and intelligent women to care for the sick has recently appreciated the dangers which are due to and may result from allowing untrained midwives to care for mothers and babies.

And so at old Bellevue Hospital, the cradle of trained nursing in this country, was also started The Bellevue School for Midwives, the first institution of its kind in this country, and opened in April, 1911.

The midwife school was the direct result of the work and planning of the New York Committee for the Prevention of Blindness, organized by

Miss Schuyler in 1908, and of which she has been the wise and devoted Chairman ever since.

The actual establishment of the Bellevue Midwife School was due entirely to the efforts of Dr. John Winters Brannan, President of the Board of Trustees of Bellevue Hospital. He had such faith in the practicability of the views of the New York Committee for the Prevention of Blindness, that, of his own accord, he secured from the city sufficient funds to make possible the little midwife school mentioned.

Possibly a brief report of the first four years' work of the Bellevue School for Midwives, the only one of its kind in this country, would interest the Association.

REPORT OF THE BELLEVUE MIDWIFE SCHOOL, FROM AUGUST 1, 1911 TO AUGUST 1, 1915

Applicants for training are accepted from residents of New York City, between the ages of twenty-three and thirty-five, who must be cleanly in their person and homes, and of high moral character. There are no fees for instruction; board and lodging are also furnished free of charge. Applicants serve a probation period of four weeks, after which they are registered as pupils if they have shown suitable aptness. They must live in the school, and pursue a six months' course, during which they are taught the management of normal confinements and to recognize abnormalities. Instruction is given by a visiting obstetrician, the resident obstetrician and superintendent. In addition, practical demonstrations are given and bedside clinics are held daily in the wards of the school.

During the first two months, the work includes the care of the mothers and babies in the school; the second two months, assisting at labors in the hospital and in the tenement district; attend clinics, and postpartum calls on out-patients under the supervision of a graduate nurse. The last two months, pupils deliver patients, first in school and on the district, under the direction of the resident obstetrician. In conjunction with the school, a prenatal clinic is held every afternoon at two o'clock. At the clinic, applicants for care during confinements are registered, short histories are taken, urines are examined, physical and pelvic examinations are made, instruction as to hygiene is given to the patient, probable date of confinement estimated and patients told to return at definite intervals. This is an important feature in the course of the pupils, as each is required to serve a definite time in the clinic and make examination under the direction of the resident obstetrician. Pupil midwives serve at least ten hours daily, every week. Each midwife must witness or assist in at least eighty deliveries and, in addition, deliver a minimum of twenty cases. When this course is completed, a practical and oral examination is given

by a visiting obstetrician, and if the candidate successfully passes these, a diploma is granted.

SCHOOL ESTABLISHED AUG. 1, 1911

Number of inquiries or applications from prospective midwives	803
Number of applications from prospective midwives accepted	204
Number entered school	106
Number of pupil midwives dropped from Roster on account of illness, incompetence, character, etc	40
Number of pupil midwives in school at the present time	33

Number of graduates of the school

1912	25
1913	22
1914	40
1915	36
(six months)	123

NATIONALITY OF THE GRADUATES

Italian	30	Romanian	1
German	24	Slavish	1
American	13	Bohemian	1
Hungarian	13	Russian	4
Polish	10	Swedish	1
Irish	5	Finnish	1
English	3	Norwegian	1
Austrian	6	Swiss	1
Scotch	3	Lithuanian	2
Danish	2		

NATIONALITY OF PUPIL MIDWIVES IN SCHOOL

Italian	12	Polish	6
German	3	Russian	1
American	4	Irish	1
Hungarian	3	French	2

NUMBER OF APPLICATIONS TAKEN OF PATIENTS AT CLINIC

August, 1911 to January, 1912	39
January, 1912 to January, 1913	421
January, 1913 to January, 1914	1218

Education, Licensing and Supervision	137
January, 1914 to January, 1915	1351
January, 1915 to August, 1915	1018
	4047
Number of patients registered undelivered, to be delivered, and delivered elsewhere	1316

DELIVERY OF PATIENTS	IN SCHOOL HOSPITAL
August, 1911 to January, 1912	54
January, 1912 to January, 1913	185
January, 1913 to January, 1914	230
January, 1914 to January, 1915	307
January, 1915 to August, 1915	190
	966

DELIVERY OF PATIENTS	IN TENEMENTS
August, 1911 to January, 1912	6
January, 1912 to January, 1913	131
January, 1913 to January, 1914	464
January, 1914 to January, 1915	630
January, 1915 to August, 1915	534
	1765
Total	2731

1. Septic pneumonia—edema of lungs (delivery normal) 3
2. Accidental hemorrhage—hydramnios
3. Suicide—ruptured uterus

NUMBER DIED AFTER BEING TRANSFERRED TO BELLEVUE

1. Rupture of uterus (ventral fixation had been done) 3
2. Puerperal sepsis—(labor uneventful, negative blood culture) 3
3. Ruptured pelvic abscess, myocarditis. Maternal mortality, 0.21 per cent.

NUMBER OF FETAL DEATHS AND CAUSES

Prematurity	7
Atelectasis	4
Syphilis	0

Generalized hemorrhages or hemophilia	4
Malnutrition	1
Unknown	4
Abscess of parotid gland	1
Pneumonia	1
Fractured skull	1
Cong. malformation of heart	2
Rupture of adrenal gland	1
Cerebral hemorrhage	2
Melena neonatorum	1
Total	29

NUMBER OF CASES TRANSFERRED TO BELLEVUE (MOTHERS)

Contracted pelvis	19
Abscess of mammary gland	2
Alcoholism	1
Psychopathic	3
Influenza	2
Miscarriage	1
Salpingitis and pelvic cellulitis	2
Ventral fixation	1
Hydramnios	2
Phlebitis	2
Secondary syphilis	1
Toxemia	1
Otitis media	1
Sepsis, puerperal	2

(One bad Widal reaction.)

Hemorrhage	1
Total	41
Number of sapremia (no mortality)	6
Number of mammary gland abscesses	2
Number of infections of umbilical cord	0
Number of gonorrheal ophthalmia	1
Number of deaths of out-patients	0

Number of infections of out-patients	0
Number of revoked licenses from graduates of Bellevue Hospital School of Midwives	0

The conservative nature of our teaching at the Bellevue School for Midwives is shown by the fact that in the first four years of its existence the forceps was used only sixty-seven times in 2731 cases, or once in each forty cases—a forceps percentage of 2.4 per cent.

Not the least advantage of our primitive attempt to educate the midwife at the Bellevue School is the thorough teaching of each candidate for graduation her limitations. The material that we have to work with is often poor, if not impossible; our standards of education as yet may not be of the highest; the six-month course allowed us is all too short for anything like an adequate training, but one important fact is instilled into the brain of each midwife, and that is the knowledge of her own limitations—the knowledge of what not to do, and when to seek the aid of a practising physician.

If we must have the midwife among us, then let us hope that the standard of her education be placed so high that only the more intelligent will be able to successfully compete for license to practise.

The higher standards sought for the training and examination of midwives in England, through the provisions of the Midwife Act, have resulted in securing for the profession a higher class of women. These now include not only the well-educated but also many nurses who recognize the value and importance of midwifery training and are willing to enter the service, now that it has been made a reputable calling (Van Blarcom).

SUPERVISION

As far as we have been able to ascertain, most of the supervision of the midwife in this country exists only on paper, and is not put into actual practice. Notable exceptions are to be found in the cities of Philadelphia, Buffalo, Pittsburgh and Providence.

Supervision means not alone the inspector visiting the midwife in the latter's home and checking off the contents of such a bag as she (the midwife) chooses to present for inspection, but it means going to the homes of the midwife's patients and observing the actual conditions of mother and child.

That this is entirely practicable is being demonstrated to-day in the cities just mentioned and, as far as we are aware, in no others.

Even licensed midwives should be supervised by the local department of health, this supervision to consist of instruction as well as inspection and to be carried on for the purpose of limiting the work of even most

highly trained midwives to nursing care, instruction in hygiene of pregnancy, attendance upon normal cases of confinement only, and instruction of the mother in the care of her baby.

Quite obviously this instructive supervision involves a knowledge of the condition of the midwife's patients, and this can only be learned through visits to the homes of the patients themselves. Moreover, supervision of this character is made still more effective through conferences with the midwives convened periodically for this purpose. In two or three places in this country, midwife supervisors assemble midwives under their jurisdiction, discuss practical points in their work, and encourage questions and discussion.

This outline of supervision follows closely the system which has been in successful operation for some years in England and New Zealand—two countries conspicuous for their low infant death rate.

A study of the midwife question in England, previously mentioned as made by Miss Van Blarcom, has been used as a basis for recommendations looking toward effective midwife control in this country. It is gratifying to note that already, in a few instances, these recommendations have been adopted in whole or in part.

LICENSING

No unlicensed woman should be permitted to practise midwifery, and only as a temporary measure should any but properly qualified women be granted a license.

The Advisory Council of the New York State Department of Health, empowered by law to regulate the practice of midwifery in New York State outside of New York City, Buffalo and Rochester, amended the Sanitary Code of the State of New York on November 16, 1914, to include a chapter on midwives. The plan of the Department of Health, which the New York Committee for the Prevention of Blindness endorses, comprises:

1. The licensing of all women who call themselves midwives in order that they may be brought under the supervision of midwife inspectors.
2. After January 1, 1915, the issuing of licenses to those women only who had attended fifteen maternity cases and nursed fifteen lying-in patients, under the supervision of a physician, this pending the enactment of laws empowering the Board of Regents to examine and license midwives and regulate midwife training schools.
3. The adoption of rules and regulations which would limit the work of midwives to attendance upon normal cases only, and nursing of mother and child,

these rules and regulations to be enforced by a practical system of supervision which would tend to improve the work of the midwives over their patients.

Since January 1, 1915, the New York State Department of Health has required all midwives to register their name and address with the local registrar of vital statistics, this registration to be repeated annually and upon any change of a midwife's address. Moreover, the State Department has already adopted rules and regulations governing the details of the practice of midwives and has made a beginning toward midwife inspection such as has been described above, having as its object the improvement of those women who were capable of profiting by instruction, and debarring from practice those who were unquestionably a menace to the welfare of mothers and babies.

This action is regarded as the most progressive step thus far taken in this country toward the solution of the midwife problem.

It is frankly acknowledged by those who are interested in this work that women who have attended fifteen maternity cases and nursed fifteen lying in patients as their sole preparation to practise as midwives are far from being adequately trained for this function. It should be understood, therefore, that this limited and inadequate preparation is accepted only as a temporary provision which forms one link in the chain which will ultimately provide for adequate midwife control. It must be remembered that in the licensing of doctors, lawyers and all other practitioners, it has been necessary, first, to register all who claim to be practising the profession in question and next, to set the standard for admission to practise, which has always been admittedly too low and which has been almost invariably steadily raised. Accordingly, it is hoped that in the not far-distant future there will be on the statute books of the State of New York a law which will permit (*a*) only those women to practise as midwives who shall have been licensed to practise by a state board of examiners appointed by the Regents; (*b*) licenses to be issued only to those candidates who shall have passed a written and oral examination given by the State Board of Midwife Examiners; and (*c*) only such women as have graduated from schools for midwives approved by the Regents shall be eligible for this State Board examination. If a law imposing this restriction is passed, it will then be possible to steadily raise the standards of training, examination and licensure until only highly trained women will find it possible to obtain midwife licenses. This will mean the elmination of the unfit and even mediocre practitioners, and leave in the field only a small group who may be regarded as public health nurses.

Within the present year Miss Grace Abbott, Director Immigrants' Protective League, Chicago, in an article "The Midwife in Chicago" makes

a study of the training and control of the midwife in that city, and incidentally of several of the other larger cities of the country.

Miss Abbott concludes that

since the licensing of practitioners is a state function, to meet the need of the Chicago situation, an amendment to the statutes containing the following essential features should be obtained:

(1) Training in a school approved by the State Board of Health.
(2) Licensing after examination.
(3) Annual renewal of licenses without cost, provided the midwife has observed the rules and regulations of the board.
(4) Supervision of the practice of midwives.

As Chicago has no school for midwives, requirement (1) would be of little use. The establishment of such a school would undoubtedly be forthcoming upon the passage of such a law.

As far as the practical education of the midwife is concerned, such a school for midwives as that at Bellevue Hospital, now in the fifth year of its existence, could readily be extended and enlarged to meet almost any requirement.

CONCLUSIONS

1. The midwife should have no place in modern medicine or surgery.
2. For the present the elimination of the midwife is an impossibility.
3. The midwife is to-day a necessary evil, for traditional, social and economic reasons, attending as she does about 40 per cent of confinements in this country.
4. Of the three professions, namely, the physician, the trained nurse and the midwife, there should be no attempt to perpetuate the last named as a separate profession.
5. The midwife should never be regarded as a practitioner, since her only legitimate functions are those of a nurse plus the attendance on normal deliveries when necessary.
6. The solution of the midwife question in the rural and outlying districts is to be found in the inclusion of midwifery service in rural district nursing, should a physician be not available.
7. Control of the education, licensing and annual renewal of license should be in the power of the State Board of Health or State Board of Education, supervision of the practising midwife by the local board of health, and annual renewal of license to depend upon the midwife's record for the year.
8. State licenses, state control, high standard of education, annual renewal of license, critical and constant supervision of the midwife, en-

couragement to trained nurses to take out midwife licenses, and further extension of dispensary maternity services will mitigate the midwife evil, reduce the ranks of the midwife, and render the remaining ones less a menace to the country, and pave the road for their final elimination.

10. *The Midwife Problem*

E. R. Hardin

The practice of midwifery is as old as the human race. Its history runs parallel with the history of the people and its functions antedate any record we have of medicine as an applied science. Midwives, as a class, were recognized in history from early Egyptian times. The practice of midwifery is closely bound by many ties to many social customs and prejudices.

The various European countries have for years had accurate birth and death reports, and have thus long realized the great danger of the ignorant midwife without instruction and supervision. In most of these countries the midwife has been a fixed institution for hundreds of years, and receives a strict course of training and supervision by the Government. The training of the midwives in Germany, where they are required to spend six months in a Government obstetric hospital, under the instruction and supervision of trained obstetricians, is far superior to that which the great majority of physicians receive in this country before graduation. England, in 1902, established by an act of Parliament, the "Central Midwife Board." The purpose of this Act was to secure the better training of midwives and to regulate their practice. They are trained in Government obstetric hospitals for six months, and then licensed after examination by the Central Midwife Board, after which their work is supervised by the Government.

The well trained midwife under strict Government control has no doubt greatly reduced the maternal and infant mortality in many of the European countries, but it is admitted that this system of control is expensive and has not entirely solved the midwife problem in these countries. Moreover it gives the midwife a professional status and establishes two standards of service, when there should be but one. This being true it would seem to be poor judgment to attempt to make competent obstetricians out of the great army of ignorant women now practicing midwifery in this country. This may be practical to a certain extent in some of the largest cities, but even there it seems that the solution is the outdoor obstetric clinic.

In this country there has been great improvement in standards of health administration, in domestic and civic sanitation, and the enactment of laws and penalties relating to the practice of midwifery in many

Source: E. R. Hardin, "The Midwife Problem," *Southern Medical Journal*, 18 (May 1925), 347–350. Reprinted by permission of the *Southern Medical Journal*.

states, and yet our maternal mortality has steadily increased. Statistics show that in 1918, 23,000 women in the United States died from conditions dependent on child birth, and in 1921 the maternal death rate for our country was higher than that of every foreign country for which we have statistics, except that of Belgium and Chile. Polak is authority for the statement that more than 61 per cent of all gynecological surgery is the direct result of poor obstetric practice. Thus in addition to the high mortality thousands of women are crippled and subjected to operations, as a result of child birth under existing midwifery conditions in this country. Much of this mortality and morbidity can be prevented by proper handling of obstetric cases, as may be seen from the practice of obstetric specialists and the various obstetric hospitals and dispensaries.

This great loss of human life and economic wastage dependent on it are due to ignorance on the part of the people and the economic impossibility of providing for the vast majority of women, competent obstetric care for what they are willing to pay. We must realize that to provide trained workers is not sufficient, if the people through ignorance will not employ them. The problem is to provide competent obstetric care for every child bearing woman in the country for what she is able to pay, and at the same time educate her to make use of this service.

The economic factors involved are so large and so complicated that it is doubtful if relief can be expected without municipal, state and perhaps Federal aid. The Sheppard-Towner Bill for the promotion of infant and maternal welfare is the first step in this direction and will no doubt go far toward educating the mothers of this country to demand better obstetric service. The public must be educated, and better informed if the midwife is ever to be eliminated or even successfully controlled. It is a matter of common knowledge that about 40 per cent of all confinements in this country are cared for by midwives. These are, except in rare instances, ignorant, untrained, incompetent women, and some of the results of their incompetence are unnecessary deaths and blindness of infants, avoidable invalidism, suffering and death of mothers. From all information available it seems that what is most needed in this country is the better training of physicians in obstetrics, and not an attempt to educate the midwives to the extent of the European countries. If this is done she may become a fixed element in our social and economic system and assume a legal status which later cannot be altered. It is at present impossible to secure cases sufficient for the proper training of physicians and nurses in obstetrics, since about 75 per cent of all material otherwise available for clinical purposes, is utilized in providing a living for midwives.

Broadly speaking three standpoints are taken in this country: first, the midwife should be abolished; second, the midwife had best be ignored and left to her own devices; third, the midwife should be raised

to a higher plane by proper state control and education. The first proposition is impossible, until some better substitute for the midwife is provided to care for the large number of women she attends in child birth, and until the people are sufficiently educated to demand better service. The second proposal is unworthy of serious consideration. The third proposition is at present, the only practical way of dealing with the midwife problem, whether it has for its object the temporary safeguarding of helpless women and children or finally the elimination of all but the educated midwives. Since the evil cannot be eradicated, the danger to the public can be minimized by some provision for the proper regulation, supervision and control of the midwife by the state. The methods of regulating midwifery may be divided into three classes: restrictive measures carried to indirect abolition; educational restriction and finally registration and supervision. The purpose of regulation by educational restriction, generally speaking is not to disturb the existing body of midwives but gradually to replace them by means of progressively elevated requirements and standards, by a smaller body of well trained women. This method may be carried in the course of years to the point of practical abolition. The primary object of registration is to bring the midwives under the supervision of competent officials, so that their work may be subjected to some measure of supervision.

The last method, namely, registration and supervision, seems to be the only one applicable to the rural section of the South, at the present time. It is the plan that is being followed by the state of North Carolina. In accordance with this plan our County Health Department five years ago passed certain laws governing the practice of midwifery in Robeson County. Under this law the midwife must register with the County Health Department and attend a course of lectures given by the County Health Officer or other designated physicians, covering a period of six hours during the year. The midwives are also prohibited from making vaginal examinations, giving douches, using grease or other lubricants on the private parts of the patient or on the baby's cord or administering any drugs to hasten the course of labor. They are further required by this law to call in a physician in case any accident or complication should occur. The manner in which our midwives have responded to these regulations has been encouraging. Regular meetings have been held at intervals of three to six months during the past five years, for all midwives practicing in the county. The attendance on the whole has been good. Out of 128 registered there has been an average attendance of 90 at all the regular meetings during the five years. Many of our midwives have to come a distance of twenty or thirty miles. In our county we have three races, white, indian and negroes, and therefore three races of midwives. The youngest midwife registered is 25 years old and the oldest 77 years. A recent article in the American Magazine on census

taking, stated that there was only one occupation that men were not listed for, and that was "midwife." We had three of these rare specimens, but eliminated them. Out of the 128 midwives registered over 100 are colored and only 38 can read and write. The average age is 56 years. Wassermanns were taken on 63 midwives, many of whom gave a definite history of having had miscarriages, and thirteen showed positive. Two midwives have been prosecuted for failure to use silver nitrate in the babies' eyes and their license has been revoked. In these cases the babies developed ophthalmia neonatorum. During the five years forty midwives have been eliminated by death, and other causes.

Our plan has been to hold the meetings at the County Court House for all midwives practicing in the county. When any of the midwives fail to attend the meetings they are ordered in and given individual instruction. In this way practically all our midwives have been questioned as to what they do from the time they get to the house of the woman in labor, until the patient is delivered, and they are ready to leave. Some of them were found hopeless and were eliminated, but the majority have made a creditable showing when quizzed and have demonstrated the manner in which they use the silver nitrate solution which is furnished by the state for the babies' eyes. Before this work began a great majority of our midwives were putting grease of some kind on the baby's cord, or on the genitals of the women they served. Midwives who continue to ignore instructions and use grease on the women or on the baby's cord are being eliminated as soon as the facts come to our knowledge. The midwives have all been given a list of the few things they should take with them on their cases. Most of them have willingly supplied themselves with this necessary equipment, and at a recent meeting when they were asked to bring their bags for inspection, the majority of them made a good showing. It is a significant fact that none of them had any drugs or medicine except the lysol, and boric acid powder that they were told to get. Realizing all too well the extreme limitations of this large body of ignorant women who are attending a large per cent of obstetric cases in our county, I have tried to make them understand their grave responsibility. I have tried to drive home to them the things that they must not do, and have particularly emphasized the fact that it is their duty and responsibility under the law to have the family call a physician when any complications occur. They have been told repeatedly that it is dangerous for them to make vaginal examinations and give douches, that it is against the law, and that they will be prosecuted if they violate this law. Our midwives now carry sterile gauze and cord tape for the baby's cord, a scrub brush, sterile cotton, lysol and antiseptic soap to clean their hands and the genitals of the patient. They have a wholesome fear of the law and the "State Doctor." In the beginning some of them were disposed to criticise the doctors. I

have tried to make them understand that they should attend only normal labors, and that the doctors were their best friends and their last court of appeal in time of trouble. There is no doubt that the large number of women in our county who are attended by midwives, are in safer hands now than they were five years ago. I am also persuaded that the great body of midwives in the county have a more wholesome respect for the doctors than they had five years ago.

The midwife of Robeson County is rather typical of the midwife of the rural South. She is far below the European midwife in intelligence and no training under the sun could make her a competent obstetric attendant. Therefore, it seems that any scheme for improvement in obstetric teaching and practice, which does not contemplate her ultimate elimination, will not succeed. This is not alone because such midwives can never be taught to practice obstetrics successfully, but most especially because of the moral effect upon obstetric standards. Therefore it seems that the most satisfactory way to abolish the more objectional part of the midwife problem is to recognize the midwife, place her under control and the state educational requirements, and gradually to elevate these to the extent that only the more intelligent class of midwives shall remain to practice. The history of all reforms will show the difficulty of displacing old established occupations and social customs by legislation or other restrictions, unless a certain amount of time is allowed for the establishment of the new custom and the displacement of the old, and unless such restrictions are brought to bear upon actual rather than ideal conditions.

Let us then be charitable toward the midwife because the medical profession must assume a large part of the responsibility for present midwifery conditions; but for the sake of the mothers and babies let us welcome and encourage any reasonable effort toward its solution. This attitude on the part of the profession has accomplished wonders for medicine in recent years, and who can say that it may not go far toward solving the midwife problem.

V

The Response of the Midwife Proponents

The problems of poverty, geographical separation, and language barriers prevented midwives from forming effective organizations or speaking out in their own defense. Largely isolated from each other and left to their own resources, they went about their work as unobstrusively as possible. Unlike the present-day situation in which feminists often speak out in behalf of midwifery, early twentieth-century women's rights advocates did not perceive the "midwife problem" to be a vital feminist issue. Lacking the support of the organized women's movement, the midwife's most important allies were usually public health officials and, to a lesser extent, sympathetic physicians.

The selections included in this chapter examine the major themes developed by the midwife proponents. The first selection, "Schools for Midwives," by Dr. S. Josephine Baker, was published in the *American Journal of Obstetrics and the Diseases of Women and Children* in 1912. Serving with the New York City Department of Health for more than a quarter of a century, Baker's efforts at midwifery regulation and supervision played an instrumental role in reducing that city's infant mortality rate by one-half. She wrote a variety of articles for medical journals and popular magazines in which she called for the training and regulation of midwives. Her successful endeavors in New York City enabled her to develop a strong defense in behalf of the trained midwife which her opponents were reticent to criticize.

As the title of this selection implies, "Schools for Midwives" focuses on the need to establish formal midwifery training programs. After surveying the educational and regulatory policies of the major countries of Europe, Baker concluded that the efforts of the United States in this

regard were "remarkable mainly for their deficiency." In an effort to determine more about the American midwife situation, she sent out a lengthy questionnaire to all of the state boards of health as well as to the health officials of a number of prominent cities. What Baker discovered was that most health officials knew very little about their midwives. Only thirteen states reported that they had laws regulating midwives, and many local ordinances were found to be in conflict with state laws. A very useful feature of this article is the inclusion of a chart which summarizes the findings of Baker's midwifery survey.

The second selection, "Midwives in America," written by Carolyn Conant Van Blarcom and published in the *American Journal of Public Health* in 1914, expands on the themes presented in Baker's article. Van Blarcom, who was a graduate of the Johns Hopkins Hospital Training School for Nurses, wrote frequently on the topic of the midwife. One of her most significant works, *The Midwife in England*, published in 1913, was an investigation into the midwifery practices of the United States, England, and fourteen other countries.

Drawing from her extensive knowledge of midwifery training and regulatory programs in Europe, Van Blarcom maintained that the only solution to the American "midwife problem" was the education, licensure, and control of midwives. She recommended raising the status of midwifery to a profession in its own right. To those physicians who found that the trained midwife might invade their province, she argued that the issue was not one "of providing a living for doctors" but of "securing better care for mothers and babies." Moreover, she noted that the midwife performed a number of functions, such as making beds, preparing meals, caring for other children in the family, and acting as a "general adviser and woman friend" in a time of great need, which the physician was usually unwilling or unable to offer.

"The Best Means of Combatting Infant Mortality" by Abraham Jacobi, which appeared in the *Journal of the American Medical Association* in 1912, is included in this chapter because it demonstrates that the medical community did not unanimously condemn the midwife. While physicians were generally more vocal in their opposition to midwifery than in their support for it, a minority of medical practitioners did speak out in the midwife's defense. The support of such a well-known physician as Abraham Jacobi was particularly significant. During his tenure as president of the prestigious American Medical Association, he took the opportunity to defend the midwife in both his opening and farewell addresses to the association.

As one of the foremost pediatricians in the United States, Abraham Jacobi was painfully aware of the nation's alarmingly high infant mortality rate. In "The Best Means of Combatting Infant Mortality," he

carefully outlined his blueprint for reducing this death rate. Proper prenatal care and breast-feeding were high on his list of recommendations. He specifically singled out and criticized the Nestlé Company for promoting artificial feeding. In fact, his article was replete with statistics which showed that breast-fed babies were healthier than those who were artificially fed.

Jacobi believed that midwives had a very important role to play in reducing the nation's infant death rate. He was confident that they could be taught the fundamental principles of prenatal care. Furthermore, he felt that midwives were especially suited to teach childbearing women the value of breast-feeding. He welcomed the presence of trained midwives, concluding his article with an appeal for the establishment of two hundred midwifery schools after the English or German pattern.

Lessons for Midwives, published by the Georgia State Board of Health in 1922, is representative of the many training pamphlets for midwives which were published by the various state boards of health during the 1920s. With the "rediscovery" of the midwife, health departments across the nation began to investigate their midwifery situation and to institute training and regulatory programs. Of course, not all state boards of health were equally concerned about the "midwife problem." But most southern states, where as many as 90 percent of all black births were attended by midwives, launched at least modest programs of this type.

The establishment of training and regulatory programs for midwives did not necessarily indicate a permanent commitment to midwifery. Indeed, a number of southern health officials expressed the hope that the midwife would eventually be regulated out of existence. By the same token, the unique economic situation of the south may have temporarily worked in the midwife's behalf. One of the reasons that many southern physicians supported midwifery training and regulation was that they recognized that there were few, if any, monetary benefits to be gained from assuming the work of midwives who attended the births of impoverished, rural women.

Many cities and states with large immigrant populations also felt compelled to investigate their "midwife problem." Under the direction of Dr. Julius Levy, New Jersey assumed a leadership role in midwifery training and supervision. The last two selections in this chapter highlight some of the efforts undertaken by New Jersey in behalf of its midwives.

"Maternal Mortality and Mortality in the First Month of Life in Relation to the Attendant at Birth," written by Julius Levy and published in the *American Journal of Public Health* in 1923, compares the maternal and neonatal death rates of New Jersey's midwives and physicians. Through statistical analysis, Levy showed that the lowest maternal and neonatal death rates were reported in those New Jersey counties with the highest

percentage of midwife-attended births. He attributed these lower death rates to New Jersey's successful efforts at midwifery training and supervision.

In addition to instituting strict training and supervisory programs, New Jersey also undertook the novel enterprise of publishing a magazine, *The Progressive Midwife*, for its midwives. First appearing in 1927, *The Progressive Midwife* endeavored to acquaint the midwives of New Jersey with the accomplishments, aims, and problems of midwifery. It published a variety of useful articles on pregnancy, parturition, and postpartum care. Many of the issues also contained brief comments by the midwives. From 1927 until it ceased publication in 1932, the midwives of New Jersey had the unique opportunity to read a magazine designed especially for them. The November 1927 issue of *The Progressive Midwife* is reprinted in this chapter.

One of the most frustrating aspects about researching the history of early twentieth-century midwifery is the dearth of material written by midwives. An especially valuable feature of *The Progressive Midwife* is that it contains a rare, first-hand glimpse at the activities of New Jersey's midwives.

New Jersey, New York City, and a handful of other health departments instituted exemplary programs in behalf of their midwives. Health officials within these departments generally defended the midwife on the basis of her own worth. Yet probably the majority of public health officials saw no future for American midwifery. While supporting training and regulatory programs as stopgap measures, their ultimate goal was the replacement of midwives with physicians. Their position was not all that different from those physicians who viewed the midwife to be a temporary, but "necessary evil." Even the midwife's most important ally, the public health community, was divided over what was to be the permanent role and status of the American midwife.

11. *Schools for Midwives*

S. Josephine Baker

The practice of midwifery dates back to the beginning of human life in this world. At this supreme moment of motherhood it is probable that some assistance has always been required and given. Its history runs parallel with the history of the people, and its functions antedate any record we have of medicine as an applied science. To deny its right to exist as a calling is to take issue with the external verities of life. The only points upon which we may argue are the training required for its safe and lawful practice, and the essential fitness of those who follow this calling requisite for the safeguarding of the mother and child.

That Socrates' mother was a midwife bears testimony to the honorable nature of such a profession at a time when civilization in one of its highest forms was at its summit.

With the advances that medicine has made we are all familiar. Midwifery as one of its component parts has achieved a high type of efficiency, but the midwife, per se, has been left behind in the march of progress and, untrained and unsupervised, has absorbed a large part of the work of caring for childbirth, without being regarded as a serious competitor to the trained physician or, indeed, as of any particular importance as a factor in obstetrical practice. The evil has been insidious. Europe was aroused to the danger of the situation some twenty years ago. Here in the United States we have either carried on a mild sort of supervision of midwives, ignored them completely, or, in a few instances, passed mandatory legislation officially stamping them as nonexistent, and then neglected to make any provision to see that they remained so.

At the present time ignoring the midwife is criminal culpability, but denying her existence is a state of sublime ignorance that bears the elements of humor, but is essentially tragic in its consequences.

In the large cities of this country we must face the fact that the midwife is a permanent part of our social structure. To a lesser degree this fact is equally true in smaller communities and rural districts. Our vast alien population maintains the traditions of its home countries in matters pertaining to its personal habits, and the midwife is an intrenched institution in those parts of Europe which are furnishing us with the larger class of our immigrants. From a study of a large number of cases in New

Source: S. Josephine Baker, "Schools for Midwives," *American Journal of Obstetrics and the Diseases of Women and Children*, 65 (1912), 256–270.

York City I have found that the average cost of a midwife's services is eight dollars. This amount almost universally includes attendance during the confinement, daily visits for at least ten days thereafter, nursing care (crude though it may be) and many housewifely duties, including sometimes the preparation of meals and general care of the household. Contrast this with the service rendered by the average physician for the same amount of money, and it is easy to see one of the main reasons why the midwife will continue to be employed, whether or not the law recognizes her existence.

The dangers of the unsupervised practice of the untrained midwife are matters of elementary knowledge and need not be recounted. One point, however, merits attention—that is, the so-called criminal practice which has been widely discussed, and which by many investigators is considered the most serious indictment of the midwife as she exists today. This criminal practice, which mainly is concerned with the production of abortions, bears the same relation to the practice of midwifery by midwives as it does to the practice of medicine by physicians. In either case it is the illegal practice of medicine, amenable to laws which are in effect in practically all states, and directed toward the prohibition of this practice, irrespective of whether the offender be physician, midwife or layman. That a midwife may be guilty of the illegal practice of medicine is no more an indictment against her legitimate sphere of practice than it is an indictment of the practice of medicine if a physician be found guilty of the same offense. That there may be more danger to be feared in the case of the midwife is true, but the legal status of the crime is in no sense altered. While medical examining boards and boards of health should refuse to issue a license to practise to any midwife found guilty of this crime, and should revoke any license already in effect for the same cause, the action should be equally drastic in the case of any member of the medical profession under like circumstances.

The methods of control of midwives in the United States are remarkable mainly for their deficiency. Most of the European countries have met the situation in a much more able manner, and the best midwives in this country are those who have been graduated from European schools. In this country, in the few instances where we have been aroused to the necessity for action, we have remained content to pass a more or less drastic law requiring an examination before a license to practise is issued, or in many cases prescribing certain regulations of the practice with no machinery for enforcement, and no provision for further supervision to see that the law is obeyed. Europe has struck the keynote by not only recognizing that preliminary education and training is essential, but in most instances providing facilities for procuring it, but even here the situation is not wholly satisfactory.

Accurate data regarding this matter has been difficult to procure, as

the work is in a transition period in many countries and literature on the subject is meager and conflicting. In general the situation is as follows:

None of the European countries have laws which regulate midwifery practice throughout each respective country. The authorities complain of lack of uniformity. Apparently the situation is better in Germany than in the other European countries, but here too the regulations are better in some provinces (Saxony, for example) than in others. Statements in regard to the conditions as usually found are often misleading, as they apply only to certain cities or districts.

Germany—No uniform regulations exist for the empire. A midwife can practice only in the state in which she has passed her examination. If she goes to another state it is necessary for her to take another examination.

A Prussian law of May 10, 1908, regulates the fees of midwives. At present there is a strong movement toward reform, and an attempt is being made to

1. Improve the social standing of midwives;
2. Appoint a definite number to practice in each district, based upon the number of inhabitants;
3. Induce well-educated women to practice midwifery;
4. Insure against sickness and old age.

Austria—The conditions are similar to those of Germany, but not so favorable.

Switzerland—There are no uniform regulations for the entire country. Each of the twenty-three cantons has its own.

France—Here also there are no general regulations holding good for the entire country. There are, however, two classes of midwives licensed—those who may practice anywhere in France (these have a more complete training), and those who are allowed to practice only in certain districts, and who have had a more elementary previous education and training.

England—By Act of Parliament, after March 31, 1910, no uncertified midwife can practice. The provisions of the Act are carried out by the Central Midwives Board. This Board selects subjects for study, holds examinations, and keeps a record of all midwives. The Board regulates the practice of midwives, sits as a court to hear charges preferred against these women, and supervises them by visits of an inspector.

NUMBER OF MIDWIVES

The following table of the number of midwives in the various countries has been compiled from Prinzing and other sources.

Country	Number of midwives	Year	Number of midwives to 10,000 inhabitants	Average number births annually each midwife
Germany	37025	1898	6.8	55
(Prussia)	20878	1907	5.7	63
Austria	20000	1909	7.3	51
Switzerland	3305	1903	10.1	29
Norway			5.5	53
France			3.4	67
England	27238	(registered 1909)	7.3	38
Italy	15000	(active practice)	4.3	81
Russia	14000		.9	550

NUMBER OF INSTITUTIONS AND NUMBER OF PUPILS

Germany—In 1908 forty-three institutions for training midwives. Of these twenty-seven in Prussia, four in Bavaria, three in Baden, two each in Saxony, Hessen and Thuringen; the rest scattered, one in each of the remaining provinces.

Prussia—1907–1908: twenty-seven institutions, with 925 pupils.

Netherlands—Amsterdam and Rotterdam, thirty pupils annually.

Paris—Seventy-six pupils; thirty-five two-year and forty-one one-year courses.

Income of Midwives

	Average fee normal case	Average annual income
Germany	$.50–$4.00	$75.00–$100.00
Austria	2.00	60.00– 75.00
Switzerland	6.00	80.00
Russia		50.00– 75.00
England	1.00–4.00	

TRAINING (PREVIOUS TO ENTRANCE TO SCHOOLS)

The requirements for admission to the schools throughout Europe vary greatly, but generally include an age limit, good health, moral character and a definite previous education.

Prussia—The applicant must be healthy, between twenty and thirty years of age, of good character, must not have had an illegitimate child or be pregnant, and must have had an elementary education including reading, writing and simple arithmetic.

Russia—No definite requirements can be ascertained, but investigation has shown that 60 per cent. of the midwives have attended public schools.

Netherlands—An age limit of between twenty and twenty-six years is required.

England—The applicant must be at least twenty-one years of age and present vouchers of good character. An elementary education, including reading and writing, is required.

France—Age limit of nineteen to thirty-five years. Applicant must not be pregnant and must have preliminary education to include reading, writing and arithmetic.

PROFESSIONAL TRAINING

Prussia—An average of nine months. May vary from six months to one year.

France—One or two years. In Paris the second year is optional, but from 25 to 50 per cent. take the advanced course.

Italy—At the universities two or three years, but this often includes the time spent in giving the midwives an elementary education, as many applicants cannot read or write.

Switzerland—At the schools and universities from six months to one year.

Japan—At university and private institutions one year.

Netherlands—At Amsterdam and Rotterdam two years. Must conduct at least ten cases of labor, and pass an examination at the end of the course.

Russia (some parts)—Three years, including general education.

Belgium—Two years.

Scandinavia—One year.

England—Six to nine months. The midwife must deliver and nurse at least twenty cases of labor during her period of training.

In all countries the method of instruction is similar—partly didactic and partly practical.

EXAMINATIONS

Germany—Oral and practical. Their certificate gives only the right to practice in the state in which the examination takes places.

France—Oral and written.

Japan—Examination is held before the chief of the training school, a public medical officer and two obstetricians.

England—Oral and written before the Central Midwives Board.

Prussia—All midwives are expected to be examined once in three years. This requirement, however, is not closely followed.

COST OF TRAINING

Germany—From $65 to $150.

France—The two years' course costs approximately $200.

England—From $100 to $150.

SUPERVISION

Germany, Austria and *England* have special supervising Inspectors, a definite number of midwives being assigned to each.

Midwives are required to keep a day book with records of cases attended and deaths. The equipment is regularly inspected.

In order to determine the existing conditions in regard to the control of the practice of midwifery in this country, the following questions were sent to the State Board of Health in every state:

1. Is the practice of midwives in your state regulated? If so, will you kindly send me a copy or abstract of the law?
2. How many midwives are practising in your state?
3. How many births are reported annually by midwives?
4. What per cent. of the total births reported does this represent?
5. Are schools for midwives under special regulation?
   (a) If so, what is the method of control?
   (b) What public department exercises supervision over them?
   (c) How long is the course in these schools?
   (d) What is the curriculum?
   (e) How many such schools are there in your state?
6. If you have any literature regarding midwives will you kindly enclose it.

Thirty-five sets of answers were received. (See Table I.) Thirteen states have laws regulating the practice of midwives, yet only six knew the number of midwives in the state, and only one could state the number of births reported by them. Any system of supervision or enforcement of the law could not be determined in any state except as the matter was delegated to the local authorities of cities or towns. In two states the presence of midwives is not officially recognized, the law requiring that any person must qualify as a Doctor of Medicine in order to practice midwifery.

Similar letters of inquiry were sent to the most prominent cities in each state. Twenty-eight replies were received. Eleven were acting under the state law, while four had local ordinances or a state law applying only to the city in question.

In only two states—Ohio and Utah—was it conceded that any schools for midwives existed, Ohio having one under no supervision, and Utah two, under state supervision, with a required six-month course of study, yet with the curriculum unknown to the governing authorities of the cities. Trenton, New Jersey, was the only city where the number of schools was definitely stated, and these were not supervised. Milwaukee, Wisconsin, stated that the schools were under supervision, but gave no information as to their number or method of control. (See Tables I and II.) The lack of knowledge of conditions and the inadequacy of control are lamentable. It is evident that a widespread campaign of education is urgently needed in this direction.

In two cities a definite beginning has been made toward the solution

Table I

Name	1. Practice of midwives regulated by law	2. Number of midwives in state	3. States number births reported annually by midwives	4. Per cent. of total births reported by midwives	Schools for midwives		
					5. Under special control	A. Method of control	B. Character of control
Alabama	No	3000	25000	55.60	No		
Arkansas	No						
Colorado	No	Not known					
Connecticut	Yes	125	Not known	Not known	No		
Delaware	No				No		
District of Columbia	Yes	207	1218	17.3	No		
Florida	None	Not known	Not known	Not known	No		
Idaho		Not known	Not known	Not known	No		
Illinois	Yes	Not known	Not known	Not known	No		
Iowa	No		None	None	No		
Louisiana	Yes	276	Not known	Not known	No		
Maine	No	Not known	Not known	Not known	No		
Maryland	Yes	284	Not known	Not known	No		
Massachusetts	No	Not known	Not known	Not known	No		
Michigan	No	Not known	Not known	Not known			
Minnesota	Yes						
Montana	No	Not known	150	.2	No		
Nebraska	Not recognized						
Nevada	No						
New Hampshire	No	Not known	Not known	Not known	No		
New Jersey	Yes						Yes
New York	No	266	Not known	Not known	No		
North Carolina	No						
Ohio	Yes	450	None	None	No		
Oklahoma	Yes						
Rhode Island	No	200	Not known	Not known	No		
Utah	Yes	Not known	Not known	Not known	Yes		
Vermont	No	Not known					
Virginia	No	Not known	Not known	40	No		
West Virginia	No		None	None	No		
Wisconsin	Yes						
Wyoming	Yes	5	Not known	Not known	No		
Oregon	No	Not known	200	5	No		
Albany, N.Y.	No	6	300	19	No		
Baltimore, Md.	Yes	146	Not known	Not known	No		
Binghamton, N.Y.	No	4–5	196	21	No		
Boston, Mass.	No	Not known	None	None	No		
Bridgeport, Conn.	Yes	20	1555	53	No		
Buffalo, N.Y.	Yes	50	Not known	Not known	No		
Columbus, Ohio	Yes	Not known	Not known	Not known	No		
Fall River, Mass.	No	45	850	20	No		
Grand Rapids, Mich.	No	21	416	14	No		
Holyoke, Mass.	No	6	305	20	No		
Jersey City, N.J.	Yes	115	Not known	53	No		
Kansas City, Mo.	Yes	12	100–125	2–3	No		
Los Angeles, Cal.	Yes	130	528	10	No		
Louisville, Ky.	No	25	400	10	No		
Memphis, Tenn.	Yes	40	50–100	Not known			
Milwaukee, Wis.	Yes	140	3948	25	Yes		
New York City	Yes	1300	50000	45	No		
Omaha, Neb.	Yes	18	500	5	No		
Philadelphia, Pa.	Yes	178	8640	24	No		
Portland, Me.	No	1	6–7	Not known	No		
Providence, R.I.	No	39	1536	31	No		
Reading, Pa.	No	12	300	12	No		
Richmond, Va.	No	120	1230	45	No		
Rochester, N.Y.	Yes	16	1500	33	No		
St. Paul, Minn.	Yes	207	Not known	Not known	No		
San Francisco, Cal.	No	60	100	16⅔	No		
Syracuse, N.Y.	No	12–15	425	15	No		
Trenton, N.J.	Yes	672	Not known	Not known	No		

Table I—Continued

Schools for midwives			6. Literature regarding midwives	
C. Length of course	D. Curriculum	E. Number of schools		
.....	.....	None	No.....	
.....	.....	Not known	No.....	No registration of vital statistics; no information
.....	.....	None	Yes	
.....	.....	None	Yes	
.....	.....	Not known	No.....	
.....	.....	Not known	No.....	5. Examined and licensed by Board of Medical Supervisors, then registered at Board of Health.
.....	.....	Not known	No.....	
.....	.....	Not known	No.....	1. Midwives required to register.
.....	.....	.....	Yes	Midwives are licensed by the state and are examined by the State Board of Midwives, no provision for training is made.
.....	.....	Not known	No	1. Not recognized, probably about 40 in state.
.....	.....	Not known	No.....	5. Examination and license fee.
.....	.....	None	No.....	
.....	.....	Not known	Yes	(b) Examination of applicants held twice yearly after advertising in newspapers.
.....	.....	None	No.....	1. Midwives not recognized. Requirements same as for degree of M.D.
.....	.....	None	No.....	
.....	.....	Not known	No.....	
.....	.....	None	No.....	
.....	.....	Not known	No.....	1. Requirements same as for degree of M.D.
.....	.....	Not known	.....	No legislation or control—facts not known.
.....	.....	None	No.....	
2 years	.....	Not known	Yes	(b) State Board of Medical Examiners.
.....	.....	Not known	Yes	1. Only requires that midwives report births—local laws for New York City and Buffalo.
.....	.....	Not known	No.....	
.....	.....	1	Yes	(e) Quiz school—of little value.
.....	.....	Not known	No.....	Statement only that practice of midwives is not forbidden.
.....	.....	None	No.....	1. Simply requires reporting of cases of opthalmia neonatorum.
6 months	Not known	2	No.....	(a) State Board of Medical Examiners.
.....	.....	Not known	No.....	
.....	.....	None	No.....	
.....	.....	Not known	No.....	
.....	.....	Not known	Yes	
.....	.....	None	Yes	(b) State Board of Medical Examiners licenses successful candidates.
.....	.....	None	No.....	
.....	.....	Not known	No.....	
.....	.....	Not known	No.....	1. State Law.
.....	.....	Not known	No.....	
.....	.....	None	No.....	Not recognized, fined if practising.
.....	.....	Not known	No.....	1. State law.
.....	.....	None	No.....	Special laws for Erie Co. (b) only if complaint or violation of law.
.....	.....	Not known	No.....	1. State Law.
.....	.....	Not known	No.....	
.....	.....	Not known	No.....	
.....	.....	None	No.....	
.....	.....	None	No.....	1. State Law.
.....	.....	None	No.....	Examined by Health Commissioner and licensed.
.....	.....	None	No.....	1. Local ordinance.
.....	.....	None	No.....	1. Required to report births.
.....	.....	Not known	Yes	
.....	.....	Not known	No.....	1. State Law.
.....	.....	Not known	Yes	1. Special State Law applying to New York City.
.....	.....	None	No.....	1. Required to register.
.....	.....	Not known	No.....	All requiring training sent to Philadelphia Hospital.
.....	.....	None	No.....	
.....	.....	None	No.....	
.....	.....	None	No.....	1. Required to register and report births.
.....	.....	Not known	None	1. Required to register
.....	.....	None	No.....	
.....	.....	Not known	No.....	
.....	.....	None	No.....	
.....	.....	Not known	No.....	
2 years	.....	6	No.....	(b) State Board of Medical Examiners. 1. State Law.

of the problem. In Philadelphia Dr. Newmayer, the efficient chief of the Bureau of Child Hygiene of the Bureau of Public Health, not only personally examines each applicant for a license but refers each applicant who is deficient in training to the Philadelphia Hospital, where she is instructed in the essentials of the care of cases of normal childbirth. New York City is entitled to the honor of having established the first School for Midwives in the United States under municipal control. During the summer of 1911, Dr. John Winters Brannan, President of Bellevue and Allied Hospitals of New York, obtained from the city a special appropriation for this purpose, and in July this school was officially opened.

It is situated in a separate building, devoted exclusively to that work and now has accommodations for eight patients, with a possibility of expansion within the near future. The present class of midwives numbers eight; others have entered from time to time but have left the school either because they were not fitted for the work, or because they refused to take so long a course. The length of the course has been placed at six months. The midwives live in the building all the time, observe each case that is received, and in turn they are allowed to deliver cases under the supervision of the house physician. A resident physician and a superintendent of nurses is in charge. Three lectures a week are delivered to the midwives by the resident physician. These lectures cover the elementary and practical points in the diagnosis of pregnancy, the management of normal labor, the diagnosis of abnormal conditions existing at labor, and the care of the mother and child during the puerperal period. The nurse in charge delivers three lectures weekly, covering somewhat the same subjects from the nursing point of view. These lectures are made as practical as possible, couched in simple language, and the cases observed by the midwives are used as subjects for description and demonstration.

This school is maintained as part of the nursing work at Bellevue Hospital, and is under the immediate direction of the Superintendent of Nurses. Special effort is made to train these midwives in the fundamental points of nursing of pregnant women, and special attention is directed towards the care of infants, the necessity of breast feeding, and the manner and methods of artificial infant feeding.

In the school the midwives prepare the meals, are responsible for the neatness and care of the house, take all care of the patients as well as being in attendance at the confinement. The purpose is to provide a training which will include the housewifely duties, the essential methods of nursing, and the professional knowledge essential to the proper care of cases of normal labor.

Too much cannot be said in praise of this school. In its appointments and management it is eminently satisfactory. I am informed that it is proposed to develop the out-patient department as rapidly as possible,

so that the women may have opportunity of confining women in their own homes, thus working under conditions which approximate those which will confront them when they start out as independent workers.

No special requirements for admission are maintained, but the applicant must be able to read and write, and must be of good moral character. No charge whatever is made for the course.

While this school is maintained by New York City, the Department of Health which controls the practice of midwives in the city, under a special state law, has been unable to demand that all midwives shall be trained there before being allowed to practice, on account of its limited facilities. All women, however, who apply at the department for permits and who have not cared for the requisite twenty cases of childbirth are referred to the school for the necessary instruction. As soon as sufficient provision can be made to provide for the number of midwives in the city, this course preliminary to the granting of a permit to practice should be made compulsory.

As a further argument, if any is needed, for the establishment of proper schools for midwives, a survey of the situation in New York City may be used. The Department of Health, through the Division of Child Hygiene, supervises all midwives in the city, and requires that they obtain permits to practice. These permits are in force one year from the date of issuance, and must then be renewed. Before a permit is granted the midwife must submit evidence that she has attended at least twenty cases of childbirth; that she is of good moral character, and that she has never been convicted of illegal practice of medicine. A preliminary inspection of her home equipment and personal habits is then made. After the permit is issued repeated inspections are made as nearly once a month as possible, to instruct her and to examine her bag and equipment. Infraction of any of the rules and regulations may be punished by the revocation of her permit. The use of silver nitrate solution in the eyes of the baby at the time of birth is insisted upon, and is furnished free of charge by the department. This form of supervision has been in effect for three years. So far as supervision can accomplish results, they have been satisfactory. There are at present 1344 permits in force, and during 1910 the midwives reported 51,996 births, or 40 per cent. of the total occurring in the city. In 1912 a special staff of five physicians and eight trained nurses have been provided to supervise this work. With this special staff it is believed that a higher standard of efficiency may be attained.

Of the total number of midwives, only 9.1 per cent. were born in this country; 26.4 per cent. are Italian, with Germany furnishing 23.1 per cent. and Austria 20.6 per cent. 1254 or 93.3 per cent. can read and write in their own language or in English, while 69 per cent. have had a common school education. 1085 presented a diploma from a school of

midwifery when applying for a permit to practice. Of these 512 or 38 per cent. were from foreign schools, and showed evidence of a satisfactory training. 573 or 42.6 per cent. of the diplomas presented were from schools in the United States; 350 of these were from one school in New York City. It would seem from a study of these facts that the midwife herself has recognized the value of preliminary training when with no compulsion 80 per cent. of the applicants have voluntarily availed themselves of such a course. The adequacy of the training received in this country is open to question, yet the cost of the course in the school furnished the majority of the diplomas is $75.00, which must be an item of importance to many of these women. (See Table II.)

Table II
Midwives in New York City

	Total	Per cent.
Number permits	1344	
Nationality:		
Austrian	278	20.6
Italian	355	26.4
German	311	23.1
Russian	206	15.3
United States	123	9.1
Norway-Sweden	18	1.3
England-Wales	18	1.3
Swiss	9	.7
French	13	1.0
Finnish	4	.3
Greek	2	.1
Turkish	3	.2
Holland	2	.1
Miscellaneous	2	.1
Education:		
Read and write	1254	93.3
Cannot read or write	90	6.7
Common school	928	69.0
Diploma from:		
United States	573	42.6
Foreign	512	38.8
Austria	179	
Italy	163	
Germany	53	
Russia	83	
Norway-Sweden	10	
England-Wales	8	
Swiss	3	

Table II—Continued
Midwives in New York City

	Total	Per cent.
Diploma from:		
Foreign		
France	5	
Finnish	3	
Greek	2	
Miscellaneous	3	
Total diplomas	1085	
United States Diploma presented:		
Arrested	29	
Imprisoned or fined	1 (fined $50)	
Condition of bag:		
Satisfactory	567	
Not satisfactory	6	
Condition of home:		
Clean	552	
Not Clean	21	
Condition of person:		
Clean	566	
Not clean	7	
Foreign diploma presented:		
Arrested	9	
Imprisoned or fined		
Condition of bag:		
Satisfactory	504	
Not satisfactory	8	
Condition of home:		
Clean	504	
Not clean	8	
Condition of person:		
Clean	508	
Not clean	4	
No diploma presented:		
Arrested	259	
Imprisoned or fined	5	
Condition of bag:		
Satisfactory	252	
Not satisfactory	7	
Condition of home:		
Clean	248	
Not clean	11	
Condition of person:		
Clean	252	
Not clean	7	

No amount of legal enactment for mere control after licensing and no amount of mere supervision, however faithfully carried out, will ever solve the midwife problem. If we are to meet and master the situation—and the need of such a course is imperative—we must insist that every midwife receive an adequate professional training before she is allowed to practice, and we must provide the proper schools for this purpose.

Even with a satisfactory course of training, continued supervision will always be essential, and in presenting this paper for the discussion which the importance of the subject merits, our summary of the essential features of the adequate control of the practice of midwives must include:

1. *State laws on midwifery*:
   (a) Defining the practice of midwives.
   (b) Requiring a definite course of study at a registered midwifery school.
   (c) Requiring the local health authorities to enforce the law.
   (d) A license to practice required and obtained yearly from the local Board of Health.
   (e) Continuous supervision of midwives' practice.
2. *Schools for midwives*:
   (a) Under state control, maintained under a license and subject to inspection.
   (b) Required curriculum.
      (1) Six-months course.
      (2) Instruction and practical demonstrations of management of normal labor.
      (3) Diagnosis of abnormal presentations or positions and complications of labor.
      (4) Nursing during pregnancy, confinement and puerperium.
      (5) Infant hygiene and care.
      (6) Infant feeding.
      (7) The delivery and care of at least twenty normal cases of confinement.
      (8) All teaching to be practical, with actual demonstration of methods.

In conclusion I wish to record my appreciation of the valuable aid of Dr. Charles Herrman in the review of the situation existing in the various European countries.

12. *Midwives in America*

Carolyn Conant Van Blarcom

The safe delivery of women in childbirth is a matter of national importance.—Newsholme

The problem of the midwife as a factor in American life is one which is being considered with increasing seriousness by those who are interested in the prevention of blindness and in other phases of infant welfare. Although the carelessness of many physicians is equally reprehensible, it is due in great measure to the ignorance and neglect on the part of midwives that many babies become blind from what is commonly known as babies' sore eyes (ophthalmia neonatorum).

So far as it is possible to estimate from reports secured from the secretaries of state departments of health throughout the country, midwives attend about 40 per cent. of all births in America.

The extent of their practice is not definitely known and it certainly varies in different localities, but the following percentages of births, attended by midwives during 1912, as furnished by local health officers, are suggestive:

San Francisco	25.0 per cent.
Omaha	25.0 per cent.
New York	39.2 per cent.
Chicago	45.0 per cent.
Toledo	51.0 per cent.
New Orleans	70.0 per cent.
St. Louis	75.0 per cent.

That this is not altogether an urban problem is indicated by reports from various state departments of health, estimating that during 1912 midwives attended 60 per cent. of the births in Alabama, for example; 40 per cent. in Maryland; 80 per cent. in Mississippi; 35 per cent. in Virginia; 50 per cent. in North Carolina; and 50 per cent. in Wisconsin.

The importance of the midwife problem in this country, however, is not measured by the extent to which she practises; for in Denmark, for example, although midwives attend between 90 and 95 per cent. of all

Source: Carolyn Conant Van Blarcom, "Midwives in America," *American Journal of Public Health*, 4 (March 1914), 197–207. Reprinted by permission of *American Journal of Public Health*.

births, in that country there is neither the same high death-rate among infants, nor the relative amount of unnecessary blindness which exist in this country.

The blot on our escutcheon is the fact that we give the safekeeping of nearly one-half of our mothers and babies into the hands of women who are ignorant, careless and dirty because they are neither trained nor supervised.

Investigations of the condition of midwives made in various cities during the past few years—notably in New York, Chicago, Cleveland and Baltimore—all disclose much the same information concerning these women. Although there are in America many competent midwives who have received careful training in European schools, reports from various parts of the country indicate that the majority of those practising here are dirty, ignorant and untrained. The extreme ignorance of some of the more unfit of these women is suggested by the superstitions which they foster; one, for example, will advise the mother to wear a string of bear's teeth to make the child grow strong; another that in cases of tardy labor it is beneficial to throw hot coals on hen feathers and place them under the patient's bed; another that it is flying in the face of Providence to bathe the infant before it is two or three weeks old; while others recommend that such articles as cabbage hearts, bacon rinds, beer, etc., should be included in the baby's dietary. This type of midwife knows nothing of hygiene, asepsis or antisepsis and is often practically responsible for the death and invalidism of mothers as well as the death, blindness and mental and physical impairment of infants. Visits to the homes of these women fill one with dismay, for only too often one finds that a midwife with a large practice is herself a dirty, unkempt person living in a squalid tenement. A deplorably large group is exemplified by the old woman of 80 who declared,"I am too old to clean; too weak to wash; too blind to sew; but, thank God! I can still put my neighbors to bed."

Only too often the American midwife assures her patients that it is natural for babies to have sore eyes, and she prescribes such remedies as milk, lemon juice, lard, raw potatoes, scraped beef, saliva, etc., and when the babies go blind, she piously declares that it is the Divine Will.

However, bad as the midwife is, we are sorry to have to admit that on the whole a patient is often better off in her hands than in the care of many of the physicians who compete with her. Investigations which have been made concerning the etiology of ophthalmia neonatorum and puerperal septicemia indicate that more of these cases are to be traced to physicians than to midwives.

I cite the results of a single such study as an example. The numbers are too small to furnish conclusive proof, but they are suggestive and quite typical.

Of 108 cases of ophthalmia neonatorum investigated by the New York Committee for the Prevention of Blindness in 1913, it was found that 62 were attended by physicians, 43 by midwives and 3 were emergency cases attended by neighbors; 48 of the 62 physicians used no prophylactic against ophthalmia at birth, nor did 32 of the 43 midwives. In 11 cases in which injury resulted, 6 infants lost one eye, 2 eyes were scarred, while 3 infants became totally blind. The cases of total blindness all occurred in the practice of physicians, while of the remaining 8, 6 were physicians' cases and 2 were midwives'.

It was also learned that 68, or more than half of these infants were taken to eye clinics upon the advice of a lay person, while among the physicians and midwives, the latter were apt to advise hospital treatment for inflamed eyes, while the physicians gave instruction for home care, leaving the details to the mothers with the above results.

Unhappily the problem as a whole presents other aspects quite as serious and certainly more pathetic than the conditions hinted at above. The utter absence of any provision in some of our isolated rural districts for the care of mothers and babies, by either doctors or midwives, gives rise to situations which are distressing beyond words.

Competent physicians are not apt to settle themselves in such communities as are here referred to and certainly it would seem a pity if they did. Excepting in time of the occasional emergency, much of the skill and scientific training represented by such doctors would be wasted. But the mothers and infants in these places have less recourse to relief agencies than the poor in large cities and are consequently pathetically in need of the services which a trained midwife is able to give.

From one such locality one learns that when a woman goes into labor, the first passing teamster is hailed; or perhaps a member of the family hurries down the road for the nearest tanner or blacksmith, or anyone else who through total ignorance will fearlessly rush in to meet the great emergency. The results of the practice—dismembered infants lying on the floor and badly injured mother—are too sickening to describe, but they can be imagined by those who know the value of trained work.

Contrasted with this we hear from another similar district of a nurse with obstetrical training who has volunteered her services for visiting work among the mountain poor, and who, during the past few years, has delivered about 400 infants. She has given nursing care to the mothers and babies in her charge and has taught the mothers in even the poorest huts how to take care of their own infants. In one case this nurse had to scour a skillet with ashes to provide herself with something that would serve as a basin from which to bathe both mother and infant. But in spite of this meagre outfit they were both bathed and well cared for. This nurse has even managed to have some of the mothers, whom

she has delivered, taken to a nearby town and given much-needed surgical treatment.

In America we safeguard only part of the infant population by generally requiring that a physician shall be of good character, well educated at the outset, spend from two to four years in study, and pass a state board examination before he is legally qualified to assume the responsibility of attending upon the birth of a child; while a nurse must spend two or three years in hospital training before she is considered competent simply to execute the orders of the physician, and give nursing care to mother and child during that critical period of two or three weeks immediately after birth. But excepting in a few localities, both of these functions—those of doctor and nurse—may be discharged by any untrained, ignorant woman who chooses to style herself a midwife!

So far as we are now able to learn, the United States of America is the only civilized country in the world in which the life and health and future well-being of mothers and infants are not safeguarded so far as possible by statutory requirements for at least the training and licensing of midwives. In most of the European countries the training, licensure and control of midwives are regulated by national law, while in some others—in Germany, for example—there are independent state laws regulating the work of these women. Some countries have gone so far as to provide the poor in isolated communities with the services of midwives at public expense. But apparently in no other land has the whole matter been given so little attention as in America.

In striking contrast to the provision in other countries we find that in America midwives are allowed by law to practise unrestricted in thirteen states; while in fourteen there are no general laws relating in any way to their training, registration or practice.

In the remaining twenty-one states and in the District of Columbia where there are laws relating to midwives, it is required in twelve and in the District of Columbia that they shall pass an examination before receiving from the State a license. In six states midwives are restricted to attendance upon normal cases, while in seven states the existing state provisions for their regulation are so inadequate as to be practically without effect. In New York and Pennsylvania the legislatures of 1913 enacted laws which will make possible the adoption of satisfactory systems of licensure, registration and control in these states.

The following extracts from some of our laws show how little thought has been given to the midwife as an influence for or against the public weal.

The Medical Practice Act of Maine says: "This Act shall not apply to midwives who lay no claim to the title of physician or doctor"; and the main provision of the law of North Carolina is: "That it shall be unlawful for any midwife or other person who habitually gets drunk, or who is

addicted to the excessive use of cocaine or morphine or other opium derivative, to practise midwifery for a fee."

In no state is there state-wide provision for supervision of midwives in their practice. In some states this function is discharged by a few local boards of health, but because of inadequate appropriations for such work the results are not wholly satisfactory.

Supervision is of great importance and may accomplish a great deal if it includes a certain amount of practical instruction and explanation, but inspection which means only the perfunctory checking off of the contents of the midwife's bag is almost useless.

If we are to prevent infant mortality, blindness and other calamities which, in many instances can be prevented by careful and intelligent care, we must provide the means for the adequate training of those women who have the welfare of mothers and babies in their keeping.

Registration, supervision and control are important only as secondary measures, for the foundation upon which all of this work must inevitably rest is thorough preparatory training.

Doctor Newsholme says: "The evidence already available points to the conclusion that infant mortality can be lowered by giving adequate training and help to midwives. This especially applies to the saving of infant life at and soon after birth. It has also to be remembered that the midwife's influence with the mother, whom she has helped in her need, is very great; and it is her advice as to the management and particularly as to the feeding of the infant which is most likely to be followed."

In only six states and in the District of Columbia is it required that midwives shall be trained. The requirements in the District of Columbia and in Maryland are met by having been in attendance at five cases of birth. In Indiana and Minnesota midwives must either have attended a recognized school or have passed an examination, before being permitted to practise. But midwives cannot secure training in either of these states, since they have no recognized schools. This is true also of the states of New Jersey, Ohio and Wisconsin—in which training in a recognized school is made obligatory, before censure.

So far as we are able to learn, the only school for midwives of undoubted high standards in this country is the Bellevue School, established in 1911 in New York City as a result of the combined efforts of the Trustees of Bellevue Hospital and the Committee for the Prevention of Blindness. The capacity of the Bellevue Training School is fifty pupils, the course at present covering a period of six months, which it is hoped will eventually be lengthened.

The character of the work done by the small group of graduates from this school is extremely gratifying. Although it is acknowledged that the course given is too short, these midwives have commended themselves to both physicians and social workers because of the good care they give

to their patients and because they secure adequate medical assistance for other than normal cases.

During the year of 1912 the New York City Department of Health issued licenses to 1,395 midwives. Since then the department has adopted an ordinance requiring a certificate or diploma from a training school of which it approves, before granting a permit to practise as a midwife.

As the Bellevue Training School is the only one in New York City registered by the Department of Health as "maintaining a satisfactory standard of preparation," it is quite evident that there is need in this one city at least for more extensive provision for the training of midwives.

In those cities and states where no schools exist, there is of course a greater need of education facilities if preparatory training is to be a requirement for licensure to practise.

Unquestionably the midwife problem in America has been too long ignored. It should be faced and one of two courses followed: midwives should be eliminated or they should be trained, licensed and placed under state control.

Probably the reason why this abuse has remained so long unrecognized and uncorrected is that the employment of midwives has never been a common practice among American women, although it is a widely prevalent custom among almost all other nationalities. With the rapidly increasing stream of immigration to this country the problem of the midwife, formerly of relative insignificance, has steadily grown in importance until it has attained its present formidable dimensions. So long as we continue to have this steady stream of foreigners pouring into our country, bringing with them the customs of their fatherlands, just so long and to an increasing extent will there be women of some sort discharging the function of midwives, this practice being one of their oldest and most deeply rooted traditions.

The desire of foreign women to employ midwives and the determination of midwives to be employed is so strong that even were midwives legislated out of existence they would still be called in by expectant mothers who, instead of paying the fee as such, would leave the usual sum of $5 to $10 in some place where the midwives would be sure to see it. Or should the midwife desire to evade the law she could always find a physician who, for small consideration, would sign her birth certificates, thus leaving her free to practice without the knowledge of the authorities. The patients themselves turn instinctively to midwives in their hour of need, while among the Italians the husbands of the expectant mothers will seldom permit a physician or "man-midwife" to be employed.

Attempts are being made to eliminate midwives in some localities, and they may be crowned with success. But the figures previously given for the larger part of the country, from both cities and rural districts,

show how impossible it would be to wipe out such a large and widely distributed profession from the country as a whole.

Elimination would carry with it the necessity of providing some means for the care of the large number of patients at present in the hands of midwives. The combined efforts of doctors, nurses, maternity hospitals and out-patient departments could not meet the demands made upon them by such a large number of patients over and above those they are now caring for. And more than this, if midwives were eliminated many of the patients now being attended by them would fall into the hands of that class of practising physicians which at present is doing as much or even more actual harm than the midwives themselves.

Nor can the social and economic aspects of the question be lost sight of. The midwife is almost a necessity to many of those whom she attends, offering, as she does, both medical attention and nursing care at a cost which seldom if ever exceeds the doctor's fee for medical attention alone. The midwife acts not only as a visiting nurse, but as general adviser and woman friend at a period which is fraught with much anxiety and terror. She frequently prepares the meals and gives aid in a variety of forms which an attending physician could not and would not attempt to offer.

Remembering the poverty and isolation of many of the midwife's patients and the twofold nature of the latter's offices, one can readily understand the tenacity with which her patients cling to her.

It has been advocated that the extension of maternity hospital accommodation would provide gratuitous hospital care for those patients who now turn to midwives. Assuming that the patients could be educated to this point soon enough after their arrival from foreign shores, it is in many instances inadvisable to remove the mother from her home for what must inevitably be an uncertain length of time. The mother's mere presence in the home often exerts an influence which cannot be removed with safety to other members of the family.

It would appear that the only course for general adoption toward the solution of this problem in America would be the training, licensure and control of midwives where ever they are practising to any great extent. The number of practising midwives would inevitably decrease as the standard of the profession was raised; those practising would do better work themselves and would call in competent physicians more frequently than they do now.

A beginning toward this end has been made in New York City by the establishment of the Bellevue School for Midwives, and by the efforts of the New York City Department of Health in controlling its midwife problem. The health department requires specified training before licensure and is exercising more and more rigid supervision of practising midwives in New York City.

For the improvement of the practice of midwives throughout the re-

mainder of the state the Public Health Council, established by an act of the legislature of 1913, is empowered to amend the sanitary code, which code may include provisions regulating the practice of midwifery in New York State, outside of New York City. The Public Health Council already has under consideration measures for midwifery reform.

Resolutions favoring the training, licensure and control of midwives by state authority have been adopted by a number of important medical, philanthropic and nursing organizations.

During the past year several members of the nursing profession have registered as midwives with the New York City Department of Health for the purpose of exerting their influence and lending their aid toward raising the status of the profession of midwifery. Further interest in this subject was evinced by the disciples of Florence Nightingale—an earnest worker for midwifery reform—at the first annual meeting of the National Organization for Public Health Nursing, held in Atlantic City, June, 1913. At this meeting a Committee on Midwives was appointed to consider this subject, to offer suggestions and to take steps toward raising the status of the midwife profession.

In advocating that the status of the midwife profession in America be raised, one cannot but feel that both midwives and members of the lay public should be impressed with the wide difference between a midwife and an obstetrician. The midwife should not vie with the doctor, but rather should be a competent visiting nurse with midwife training, who would be permitted to conduct only normal deliveries, and be obliged to secure medical attention for her patients upon the appearance of carefully defined symptoms of abnormality or complication.

Accordingly, the greatest value of her services would lie in giving intelligent nursing care to the mother and her infant during the twelve or fourteen days following delivery; advising the mother as to her own hygiene before and after labor and arming her with that most valuable and desirable possession, knowledge as to the care of her own infant.

As for the fear that trained midwives would invade the province of the physician, the reverse of this has proved to be the result of giving better training to midwives in England. And, to the credit of American physicians, be it said that they do not, as a body, advance this objection. Physicians and laymen alike are recognizing the fact that this is not a question of providing a living for doctors. It is entirely a problem of securing better care for mothers and babies.

For the purpose of securing as broad a view as possible of this problem and suggestions for its possible solution in this country, the New York Committee for the Prevention of Blindness, in addition to collecting the laws in the United States, has made a study of the laws relating to midwifery training and control in fourteen European countries and Australia, and of the curricula of foreign midwife training schools.

As the conditions in England, before the passage of the Midwives Act of 1902, closely paralleled those existing in America today, the secretary of the Committee for the Prevention of Blindness was commissioned to visit England for the purpose of making a detailed study of the working of the Midwives Act. This investigation included (a) a study of the early history of English midwives; (b) legislative history of the Midwives Act of 1902; (c) the organization, powers and duties of the Central Midwives Board appointed under the Act, and its methods of examination, licensure and control of practising midwives; (d) the training of midwives as carried on in hospitals and out-patient departments of hospitals and by physicians and certified midwives in their practice; (e) the administrative methods of local health officers, together with records of the work done by midwives under their supervision, and a study of the practical work done by the midwives themselves; and (f) the general effects of the workings of the Midwives Act.

Women engaged in this profession in England are required: (1) To take a course in midwifery in a training school sanctioned by the Central Midwives Board, which was appointed by an Act of Parliament in 1902; (2) To pass the examination given by the Central Midwives Board, and to present certificates of their good moral character; (3) To be registered and licensed by the board after examination; (4) To conform to the rules and regulations formulated by the board pertaining to the details of their work and equipment so long as they practise.

These regulations are enforced by local supervising authorities, who employ midwife inspectors who devote their entire time to the inspection of these women, their homes, work and equipment, and to enforcing the rules of the Central Midwives Board.

While it is not possible to reduce the value of trained midwifery work in England to any concrete terms, there is significance in the fact that during the nine years, following the enactment of the Midwives Act, the percentage of deaths among infants dropped from 151 per 1,000 during 1901, to 106 per 1,000 in 1910, and the deaths from puerperal sepsis and accidents at childbirth dropped from 46.5 per 1,000 in 1901 to 36.9 per 1,000 in 1909. It cannot be claimed that this decrease of deaths among mothers and infants is due solely to the workings of the Midwives Act, but it is believed by English workers that the better obstetrical work including nursing and medical assistance now being done among the poor in England must be reckoned as one factor in this decline. Midwives in England attend about 50 per cent. of all births.

A modification of this general system would be quite feasible for adoption in this country, since the problem in America today is strongly analogous to the one formerly existing in England, though ours is of greater magnitude and complexity, and it resolves itself into the need of supplying: (1) Facilities for the training of midwives; (2) examination

and licensure by the state; (3) supervision and control by local authorities under state control. Complete mastery of the situation requires that all three of these provisions exist.

Concerning training, there seems to be, as previously stated, but one reliable training school for midwives in this country. There is a large number of institutions designated as midwife training schools, but these are virtually nothing more than "diploma mills." Even these are poorly attended since there is little or no incentive for a midwife to enter them in quest of knowledge or training. A training school diploma is not necessary in order to enable her to practice.

If state boards of education were empowered to establish a standard to which all schools for midwives were required to conform, the first important step would be taken toward raising the status of this profession.

The authority to examine and license midwives should be vested with the state departments of education or the state departments of health in those states where it is not possible or feasible to create departments to deal solely with the midwife question. If one of the state departments mentioned required a diploma from a school for midwives sanctioned by them before granting a license, those desiring to follow this profession would accordingly be obliged to fit themselves for their work.

Midwives should be required to renew their licenses annually and to take a short post-graduate course every two or three years. Anyone not properly registered and licensed should be prosecuted for performing any of the functions of a midwife habitually or for pay.

The state department should adopt rules and regulations governing the practice of midwives and should stipulate the details of a midwife's equipment.

The control of the midwives, however, and enforcement of these rules, would be most satisfactorily carried on by local health officers. These local health officers should also be vested with power and authority to supervise the midwives themselves, their work, home and equipment, and temporarily suspend them from practice for the sake of preventing the spread of infection.

Thus the three needs—education, state licensure and supervision—would be met, and in time this would inevitably spell the solution of the midwife problem.

It has been stated that at least 40 per cent. of the births in America are attended by this group of practitioners. The question before us is, therefore, not whether or not we shall have midwives in America, but rather whether or not we shall continue to pass by with averted eyes and leave such a large percentage of mothers and new-born infants in the hands of ignorant women incapable of discharging the important functions which they assume.

13. *The Best Means of Combatting Infant Mortality*

Abraham Jacobi

My principal duty and intense pleasure is to tender my thanks to the House of Delegates which selected me for the highest honor in the gift of the medical profession of America, and to my colleagues of all the fifty states who were good enough to approve of its choice. Nor am I under less obligation for their attendance on this occasion to such citizens, men and women, as by their presence here exhibit their interest in things medical and socio-political.

My everlasting gratitude is due for the mode in which this great honor was conferred on me. Being duly aware of the small measure of my merits, I was overjoyed to have reason to believe that I owed my election to my lack of efforts to secure it. My democratic training and the gentlemanly nature of the thirty-five thousand members of the American Medical Association, like the principled citizens of all parties, resent electioneering importunities and abhor the humiliation and demoralization caused by gesticulating and shouting candidates for office and honor. I have the confidence that if there be in this or any other cultured assembly anybody looking for the highest office for the sake of power and preferment only, he will be deservedly disappointed. Whoever *sets out* to be the first, let him be the last. There is only one thing that is and must forever remain first—that is the medical profession of America, as represented in this American Medical Association, and its object, which in all its aims is only one and indivisible. That one and inseparable object is to promote the art and science of medicine, to unite into one compact organization the medical profession of the United States for the purpose of fostering the growth and the diffusion of medical knowledge, of promoting friendly intercourse among American physicians, of safeguarding the material interests of the medical profession, of elevating the standard of medical education, of securing the enactment and enforcement of just medical laws, of enlightening and directing public opinion in regard to the broad problems of hygiene, and of representing to the world the practical accomplishments of scientific medicine.

With all this, my professional friends are conversant. I want to impress

Source: Abraham Jacobi, "The Best Means of Combatting Infant Mortality," *Journal of the American Medical Association*, 58 (June 1912), 1735–1744. Reprinted by permission of the American Medical Association, copyright 1912, American Medical Association.

it, however, on our guests, lay friends both present and absent, for I want them to understand from the very wording of the constitution of the American Medical Association that their interests and ours are closely related.

In order to be powerful and influential, you must not only be wise but numerous. In last year's official report you were told that it was not prudent to increase our number. In fact, you are 35,000, and the largest medical association of the world. But please remember that yours is also the largest country of the world. There are 100,000 medical men beside us, with the same rights to enter and the same duties to perform. We have been told that reasons of finance are among those which should restrict our number. I appeal to you and to those 100,000 outside. A big bank account appeals to our treasury, but glittering gold never saved a country nor a soul. If you have money, it is yours to spend as you have made it. See to it that your House of Delegates spends it in increasing, and consolidating, and strengthening your Association. Our colleagues in the vast country want to be invited; then they will come in. They must learn what we are, and where their interests are—and the interests of the public—from better sources than the hordes of irregular manufacturers and the "freedomers" whose bitter attacks convey what knowledge many millions are permitted to have of the American Medical Association. Let the people understand the meaning of the American Medical Association and its doctors through *our* doings, and not through the scurrilous lies of our and the people's enemies. My hope is for an annual increase of thousands of members. Multiply and be fertile. Stand still awhile, and you invite decline.

It is by vast numbers only that our profession will ever attain its legitimate influence in politics and in society, and such beneficent power as Socrates, Descartes, Kant and Gladstone claimed for it. The proclamation of a great principle may impress many philosophic minds, but its realization demands the labor of the enlightened democratic masses. That is why from this exalted position of mine I beg to contribute a share to the discussion of a subject which has enjoyed an important place in the best brains and the warmest hearts of our enlightened and philanthropic era. I allude to the great mortality of the infant, and the numerous efforts to combat it. You are acquainted with them all. Many fair results have been accomplished; to add to them, is my ambition. For infants must not be born merely to be sick, or to die.

The Committee for the Reduction of Infant Mortality of the New York Milk Committee has made an arrangement with the Russell Sage Foundation which will furnish a nurse who will look after a thousand pregnant women, with a view to enable them to bear infants with *improved resistance*. The mother will be provided for in case she is overworked. Which one of the poor is not overworked?

According to the Milk Committee, and other authorities, 17 per cent. of infant deaths are caused by congenital troubles. One-third of them occur before the first month has passed. Two great remedies are recommended. One is that no midwife be allowed to handle any of these cases; the other is that after confinement rest be provided for the mothers, and the children be referred to the milk stations. There is no worthier organization than that committee. What it sets out to do, it performs. It cannot help being restricted to charity so long as one-half of us is condemned to ask and take it, and the other obliged to give and teach. The latter is probably the most valuable performance of the committee. As its activities, like those of its kind all over the country, are meant to be thoroughly altruistic, it is entitled both to praise and to criticism. I hope it will appreciate the former and make use of the latter.

Look at that program: first, no midwife for any of the thousand mothers. You ask, "But who?" Second, the Milk Station for the child because the charitable people want rest provided for the mothers, *at the expense of the baby*. If that be a good program for one thousand women and one thousand babies, if that be the best that can be invented or discovered for the one thousand lucky enough to fall into the hands of charity, what is to be done with, or for, or against those millions beyond the reach of the Sage Foundation? But you suggest, these one thousand mothers and babies are to serve as object-lessons only, to be imitated by the millions. The least, then, we must hope and work for, is that the millions of women to be confined and the millions of babies to be born now and in the future, should participate in the same benefaction which is promised a few. The universal object is to save and raise babies. My program is different, inasmuch as it suggests additions and changes.

If 17 per cent. of infant deaths are caused by congenital troubles, study these congenital troubles and obviate them. The baby's life and pathology begin nine months before its birth.

If one-third occur in the first month, study and combat that first month, and the indications arriving during and after labor.

Your dealings are not with children but with infants; not with infants only but with the new-born that is just terminating its embryonal and fetal evolution and expects to be treated like a new-born human animal and not like a calf.

No midwife is to handle the case; indeed no midwife *will* handle any of your cases, for you have none, with rare exceptions. It is proper attendance, however, which society owes to the woman and the newly-born, as a duty to them and to itself. They are valuable assets, both of them. Unless *that* be granted, no discussion is competent.

In one of the programs to relieve the coming child and the struggling mother, I read the demands of absolute rest for at least four weeks before and six to eight weeks after confinement; nursing and feeding, both

gratuitous when required; and hospitals for the illegitimate and—when needed—the legitimate confinements.

By the Milk Committee, satisfactory *rest* is wanted for the mother. That means that she did not have it in time, before or after the baby came. If rest means a long rest in bed, and milk station and no breast-feeding, you deprive her of her most important woman's privilege and office in life after child-bearing, and of the facility of getting well radically and physiologically. For without nursing the breast is liable to become atrophic and the uterus subinvolved. And the infant? Well, the infant, to give "rest" to the mother, is deposited on the altar of a milk station.

I shall be as brief as possible, for I do not believe that the speaker should have all the fun at the expense of his audience. On the other hand, I want to say my own things in my own way—perhaps taught by Jonathan Swift, who preferred to express his opinions "for the amelioration of his hearers, more than for their entertainment."

Poets have told mankind that once, in the best olden times, the world was a garden, and they want it to become so again; statesmen—not politicians—have exerted themselves to disseminate prosperity and affluence; great physicians have looked for means to ward off disease and prolong an enjoyable life; jurists have endeavored to make the globe habitable by locking up or killing criminals, or the hopeless and dangerous insane. They all deal with those who are alive and, justly or wrongly, in possession of the surface of the earth. We are expected to deal with the present only, and to fight the evils which seem to be uncontrollable now and in the near future. Is there no way to prevent those who are born into this world from becoming sickly both physically and mentally? It seems almost impossible as long as the riches provided by this world are accessible to a part of the living only. The resources for prevention or cure are inaccessible to many—sometimes even a majority. That is why it has become an indispensible suggestion that only a certain number of babies should be born into the world. As long as not infrequently even the well-to-do limit the number of their offspring, the advice to the poor—or those to whom the raising of a large family is worse than merely difficult—to limit the number of children, even healthy ones, is perhaps more than merely excusable.

I often learn that an American family has had ten children, but only three or four survived. Before the dead ones succumbed they were a source of expense, poverty and morbidity to the few survivors. For the interest of the latter and the health of the community at large, they had better not have been born.

Theoretically and practically the addition of unhealthy, sickly, sick and contagious children is a misfortune to the newcomer, to his parents, and to society. Therefore a clean bill of health should precede matrimony. The clergymen who refuse to marry couples without it are good

citizens, and the health departments are bound to see to it that contagious diseases, mainly sexual diseases, should be reported, watched, and cured. Nor is this all: Hereditary influences propagate epilepsy, idiocy, cretinism. Such persons must not be permitted to propagate their ailments.

Now we build asylums for the diseased, neuropathics, and drunkards; nurseries and schools for epileptics, cretins, and idiots; sanatoriums for incipient tuberculosis, and refuges—still too few—for the dying consumptives, withal conscious of the fact that our only hope of finally exterminating tuberculosis lies in the perfect but comfortable isolation of hopelessly advanced cases. Surely we try to cure and to prevent. Do we not begin at the wrong end? Consumptives, and epileptics, and semi-idiots are permitted to propagate their own curse, both what is called legitimately and illegitimately. Human society should have pity on itself and its future. The propagation of its degenerate, and imbecile, and criminal should be prevented. We have no positive laws yet for the syphilitic and gonorrheic who ruin a woman's life, deteriorate her offspring—if she have any—and impair the human race. We have come to this: that half of us are obliged to watch and nurse, and support the other half, many of whom should never have been born. In morals and in money, the degenerate are an expensive detriment. The only protection for the nation, for mankind, is to assure a healthy, uncontaminated progeny. Strict laws are required to accomplish that; such laws as will be hated by the epileptic, the consumptive, the syphilitic, and the vicious. No law ever suited the degenerates against whom it was passed, and it is unfortunate that while disease and incompetency and vice are to a high degree hereditary and contagious, moral health and virtue are not so to the same degree. Now those for whom the responsibility of the state does not exist are exactly those who are most entitled to it—the newly born.

Altogether, babies have a strenuous time of it, not only after birth. Heredity, degeneracy or incompetency is often caused by social influences. Financial temptations or necessity make women select not the strong and healthy men, but the old and rich. Their children are having less and less vigorous offspring. Rich and profligate boys spend their sexual powers on prostitutes and save little for possible babies. The lack of children in American families is not always due to voluntary abstinence. Thus the future of the American population has to rely on the offspring of the immigrants, and the American type of the next century will not be much influenced by those whose ancestors came on the Mayflower. Modern industry reduces the vigor and vitality of men, and woman and child labor exhausts the mothers and fathers of the future and present generations. Millions of men are prevented from contracting a marriage by pecuniary want and the impossibility of satisfying their

sexual hunger except with prostitutes. That is true not only with regard to factory hands, clerks, and employees generally, but to the picked men of the people. Army and navy, the millions of soldiers and marines of all the nations of the globe, whom we are told by our self-styled leaders to imitate, withdraw the vigorous men from natural modes of living and labor and propagation, and prevent them from marrying in time; and wars, the cynosures of our coarse politicians who take the place that should be filled by statesmen, kill and cripple and deteriorate the best muscle of the land and tempt them into perdition. Only the "weaklings" are left—and their offspring! It is sad to contemplate the short-sightedness of our loudmouthed leaders and their heelers.

The history of the newly born is pictured on their bodies. Pinard weighed numerous new-born babies. Those born in poverty were 10 per cent. less in weight than the others. Many were premature, their mothers injured and sick afterward, and without milk. Of that class, from three to four times as many die when at home as when in a well-regulated and well-fed hospital. Their subinvolved uteri and parametritides are very common occurrences and are the sources of lifelong invalidism and treatment. Those few are fortunate who need not complain like the woman healed by Jesus, who had suffered all her life from her illness and from the physicians. Those are not so fortunate who are treated according to the last magazines' academic discussions demanding an early day for getting up. A woman of the million, permitted or ordered out of bed to work, is the pivot of her poor household or her small farm or shop, or the live part of her lifeless factory machine. She is not like one of your first class paying hospital appendicitis patients who may be ordered out of bed for a half hour or a few hours daily, and will not be harmed thereby. She will continue to convalesce when she returns home. But the woman of the middle class or the poor who is told or permitted to rise early from an appendical wound, a uterine wound, or after confinement will add to her endometritis, her phlegmon, and her adhesions. All that is why even apparently simple questions of medicine will never be answered without the consideration of social questions, and medicine must more and more become the guide in the solving of social problems.

A decided physical inferiority at birth is a common occurrence. Ballantyne experienced in the Fulham Infirmary as high a percentage as 21.9. They are called unfit, when born of overworked, underfed and neglected women. Their number is much smaller and very trifling when their mothers, when poor, are looked after long before the uterine life is terminated or when circumstances, financial or sanitary, are more favorable.

Many premature, feeble, thin babies of unpromising weight may be saved when there is ample care, such as a midwife will more readily give than a doctor. If that be absent, the baby's life is endangered. Is

salvation worth while? Who can tell, unless you try? Kant, Goethe, Helmholtz were puny waifs whose lives were despaired of. But they have furnished elements of culture to the world of which we might have been deprived if they had been without the midwife's care and close attention. Licetus is said to have been 5½ inches long. He died when 80 years old. He wrote eighty books, not many of them poor. That is an achievement, though not always pardonable, or even laudable. There are more men 80 years old, but they are not all guilty of writing eighty books.

Hard labor up to confinement interferes with the life or the health of the fetus and the new-born. The least that can be done for the mother is a reduction of working hours during pregnancy, and protracted rest after confinement. The women's worst occupation is that with metals, mainly lead. Their percentage of premature births and miscarriages was 53.6; while those with other work furnished another sufficiently formidable number, viz., 17.2. Lead, mercury, phosphorus, copper, iodin, anilin, and nicotin have been found in the amniotic liquor and in the fetal organism. The indication is clear; less work, less hours, no directly unsanitary occupation, several months' absolute rest after confinement. The living result will be hardier and heavier, and more resistant babies.

When the baby is born, it wants many things; among others air and food, mostly food. Maternal milk is the only safe nutriment for the little stranger. Its quality is not much influenced by emotions, care, worries; occasionally, only, by medicines taken by the mother, or rarely by her average food. Its quality is only temporarily altered by menstruation, and never causes a change that justifies the interposition of artificial feeding. The daily quantity is rarely less than a quart. Maternal affection, the wish to nurse, the act of suckling increases the quantity. There is no such thing as absolute absence of milk secretion. Essential alterations in the articles consumed by the nursing woman are not demanded. As her appetite is mostly increased, she is entitled to so much more than her average consumption as required by the one or two pounds needed by her baby. She may eat and drink what she digests and was used to; she may perform her duties, attend to her labors—even some factory work—and fill her time as her station in life suggests. There is no reason why she should not spend time in shopping, concerts, theaters, lectures and parties, except the dog parties reminding you of 1790—even suffrage parades—provided she will not forget that she has a baby at home to welcome and feed. The checking of babies, with or without baby carriages, by department stores, is a convenient innovation, which improves the chances of babies, women and merchants alike. Elections are no longer so exciting, dangerous, or murderous as years ago—so there is no objection to woman suffrage, whether it be considered a plaything, a civic duty, or a disease. Even so, there is no danger, for infectious

diseases in the mother are no contra-indication to nursing, unless it be a small-pox case in an antivaccinationist; for not injurious bacteria but beneficent antibodies pass into the milk and improve the baby's power of resistance. All of these considerations prove the dangerous tendency of those of our colleagues who in their mistaken subserviency to the ignorant suggestions of fashionable and lazy ladyships fall in with their and the dairymen's teaching that cows are their proper God-sent substitutes. These accommodating friends of ours are, through shortsighted complacency, enemies of the race.

The mother's milk has certain protective properties not possessed by any artificial food or the milk of another animal. Experiments have proved that the latter may propagate the artificial immunity toward certain vegetable poisons—the ricin and abrin; and a wet-nurse may immunize her nursling by being herself immunized through diphtheria antitoxin. So the mother who ever was thoroughly infected with scarlatina or measles will, at least for the time she is nursing her baby, protect the latter against those infections. The infected milk of an animal will not have that same effect; immunity is secured only by the milk of the same—that is, the human animal—which proves that we are superior to our animal brethren and sisters; unfortunately, only so long as we are young. Many of us when we lose our infancy lose our superiority.

The attentive doctor and the diligent midwife know that our women, poor and rich, suffer from no organic mammary degeneration. Large and small breasts can be educated into competent milkers. They can be roused into action after days and weeks of comparative inactivity, and into renewed efficiency after a recess of one or more weeks. It is quite well known, what I alluded to, that the very suckling of the baby is the best educator of the breast. That is why for the hundreds of thousands of mothers, the doctor should be the oracle; the midwife of the people, with her future education and her diligence, the trainer. Both should remember or rather, learn, that a better milk-supply is guaranteed by not improperly and untimely straining the breasts' function. You do not milk a cow every two hours. A healthy new-born baby should never have the breast more than once every three hours; after the third month, he must get along with five meals in twenty-four hours; and he will turn out a baby worth having.

Milk contains substances organic chemistry never discovered or measured. They are the *ferments* which circulate in the blood. Some aid in the digestion of albumin; others, of fat and starch. Besides, there are defenders in it of the circulating blood; the *alexins* (Hans Buchner) destroy bacteria; agglutinins immobilize bacteria by bunching them; antitoxins formed in the infected vigorous animal destroy the poisonous toxins of the bacteria. When they are not sufficient—for instance, in bad cases of diphtheria—we inject antitoxins formed in the blood-serum of

another animal for instance, of horses. Any mother that ever had a mild or bad case of diphtheria—or, for that matter, certain other infectious blood diseases—accumulates some antitoxins in her blood and tissues, and in her future milk, and thus protects both it and her nursling. It is possible that so long as the infant is at the breast it is for that very reason less liable to take diphtheria. The fact is that few babies of the first half year become diphtheric. That is the period of nursing at its mother's breast—its mother's or another human female's, not, however, that of another animal. It is not chemistry alone, but also biology, which distinguishes the milk of their organic producers. Old Doctor Heim was told by a so-called "noble" mother: "I keep an ass for my baby. Ass's milk is as good for my baby as my own would be, is it not?" "Yes, yes," said the old man, "just as good for young asses."

In Berlin half of the babies were breast-fed in 1890; in 1900, only one-third of them. At the same time, another German town, Barmen, nursed four-fifths of its babies—during one year, 99 per cent. Of 575 starving and neglected women in a Berlin institution, 83.3 per cent. could nurse their infants; why? they were better fed than before, and gave up only when the Moloch of industry reclaimed them as victims. After these poor babies had enjoyed the privileges of some of the rich—viz., health and life—they were sacrificed again on the altar of anti-social circumstances. For during the first year of life, of 1,000 breast-fed babies seventy have died; of the artificially fed, 270 up to 430. They have been counted by the statisticians, by the parents and by the undertakers.

Wittingly or unwittingly, surely not meaning it as a grotesque joke, the Nestlé Food Company has a picture on the cover of their circular. It represents a woman with immense wings—perhaps meaning an angel—flying off with two babies to unknown parts.

The mortality of babies below 1 year has been found —not estimated— to be, for the exclusively breast-fed, 6.98 per cent.; for those brought up on a mixture of breast-milk and artifical food, 9.87; for those fed artificially, 19.75. That means that somebody or something is to be held responsible for the deaths of thirteen babies who should live in good health and with good prospects. Babies turned over to milk stations, because their mothers are told to "rest" may easily belong to that class. It is true, not every baby can be nursed, but the exceptions are scarce. One was born of a mother who died of sepsis carried in part by a dirty midwife, or by an infected or ignorant doctor. That is true, statistically, even now that other doctors boast of their asepsis. My own past life does not class me among those others. So I may plead guilty, and no one has a right to blame me for exaggerations. I am, or have been, in the same boat with some of you. Of the five hundred tracheotomies I performed before the Listerian era, of a thousand I assisted in, of thousands of scarlatina, measles, erysipelas during epidemics, and even hos-

pital gangrene during war times—too many occurred while soap and water existed without being used at the proper time and in the proper places. We did not know better, but you do. Every case of death of sepsis in the mother should burn hell into the conscience of whoever permits it nowadays; every case of death from lack of breast-milk should cause a trial for homicide against a doctor or midwife, or mother. For the latter, it is true, there are, if not excuses, many explanations. Some mothers must get up after three days to do washing and scrubbing, and do it without a sufficient quantity of food—starving women make no milk—must make a scanty living in the factory, or in a small business; others go to afternoon teas and bridge parties, or have been taught by their fashionable doctors who agree with them in their suggestions that modern science has proved that a woman's udder may be replaced by a cow's bosom, that a milk laboratory's clerk will furnish printed schedules for the modification or alteration or substitution of food adapted for every month of an orderly Fifth Avenue infant.

Ignorance can be learned from and taught by doctors, by midwives, by nurses, but ripe wisdom also. As half of our babies, in all countries, are born under the supervision of midwives, it is these who, when their education will no longer be so hopelessly neglected as in our country, in their more intimate contact with the people can exert the widest influence. They will best overcome the prejudice which derives from the well-clad people the notion that breast-feeding is no longer fashionable; they will prepare the nipples, teach cleanliness and antisepsis such as they have been taught in the schools of the—I hope—near future. Edith Peiper reports an increase within five years of from 55.7 to 72.5 per cent. of women who gave exclusively breast-milk to their babies in a public institution.

In a large midwifery school of Germany (Stuttgart), the percentage of women who nursed their babies increased from year to year under proper treatment and teaching. Of one hundred women, only 22 to 25 per cent. gave their babies breast-milk to the exclusion of other foods before 1884. Exclusive breast-milk feeding was furnished by 41.1 per cent. in 1884; 61.4 in 1887; 84.3 in 1888; 100, in 1902; 99.5 in 1903. All of these women were poor or in very moderate circumstances, but they were looked after and fed before confinement and after. It takes missionary work to accomplish results of that nature.

In our country, it is calves that are looked after by our government. The babies have no votes yet. They will wait.

I must give you a few more figures, though I may bore you. But I have more sympathy with the world's babies than even with you. I want every incredulous Thomas to leave this place convinced that every baby has not only the right to suck a mother, but also the facility.

Dietrichs reports the mortality statistics of 628 infants of the poorest

married women of Cologne. Of 100 children born alive, three of those who were nursed for nine months or more, died before the end of their first year; of those nursed from three to nine months, twelve; less than three months, thirty-five; of those who were fed artificially, forty-seven. Forty-seven dead out of 100 born alive, in one year.

Perhaps a report by Prinzing is equally convincing in connection with the mortality of other than intestinal diseases. During the years 1895 and 1896, the mortality of Berlin babies under one year, when breast-fed, was 7.09; when fed artificially, 38.6. Of 1,000 babies, congenital debility killed 14 of the breast-fed; 43.6 of those raised artificially. Of 1,000 babies:

	BREAST-FED	ARTIFICIALLY FED
Gastro-enteritis killed	12.2	171.0
Atrophy and marasmus	2.0	24.0
Convulsions	11.16	42.0
Bronchitis and pneumonia	5.6	39.6
Pertussis and diphtheria	8.3	19.3
Other diseases	17.2	46.4

The illegitimate infants fared much better than the legitimate ones. That sounds paradoxical, but the former, when controlled by the authorities, were obliged to nurse their babies; the latter were the babies of the mothers who returned to domestic and factory work, and were exposed to neglect and early and improper artificial feeding, mostly by strangers. Among living infants of the second year, the proportion is reversed, for obvious reasons. The lessons to be derived from these facts are intelligible. A social improvement of the mothers, but that only, will add to the chances of the infant population.

Boek found that of infants who died of intestinal diseases, 61.4 per cent. were fed on flours; 24.3 per cent. on cow's milk; 15.8 per cent. on a mixture of breast-milk and cow's milk, and 1.4 per cent. on breast-milk.

During the siege of Paris (1870–71) the women were compelled to nurse their own babes, on account of the absence of cow's milk. Infant mortality under a year fell from 33 to 7 per cent. During the cotton crisis of 1860 there was a famine. Men and women starved, and on account of no money for artificial food, the women nursed their babies. One-half of their mortality disappeared. In the poor forest districts of the Westerwald the bottle-fed babies had a mortality of 20 per cent.; the breast-fed babies, one of 8 per cent.

In the *Berliner Klinische Wochenschrift* (No. 28, 1911), Professor Franz publishes the report of the gynecologic divisions of the Charité. One hundred per cent. of his puerperal women nursed their babies. Dr. Kahn accomplished mostly the same results.

It is true that private practice does not reach the same number. Among the well-to-do, with better surroundings, better food, more rest, but greater indolence, less sense of responsibility, more money to throw away and more accommodating doctors to amuse them, and with more money with which to buy inferior food, the percentage of nursing women is smaller. Their daughters will know better, provided the doctors—we and our successors—will teach them.

G. Dufort reports on conditions prevalent in four districts of Belgium. Women objected to nursing, with a mortality of from 153 to 252 per one thousand, in the first year. Then the government and a private organization took measures to improve the percentage of breast-feeding women. Not all governments mix up with such things. Some are not on the job, some are on the slump. This percentage increased in certain localities where it was lowest, within two years, from 4.3 per cent. to 17.02. That increase was due to the midwives who were taught by premiums, by the practitioners and by clergymen. You see doctors and priests are still good for something. In other districts the percentage of breast-feeding was 56.6 per cent. in 1907; in the first half of 1908, 57.1 per cent.; in the second half of 1909, it was 74.12 per cent. That means an increase obtained by the country midwives in two years of 17.6 per cent. More, there were midwives who could report 94.9 per cent. in the first half of 1908, and at the end of 1909, 100 per cent.

The same midwives made it their business to extend the duration of breast-feeding. In 1907, there were fifty-seven babies who did not receive the breast through their first half year exclusively; this number was reduced to forty-eight at the end of 1909. Of the infants who were kept at the breast exclusively through six months, 64.7 per cent. extended this time to nine months; 75.4 per cent. in 1909. The author again and again refers to the powerful influence the midwives—after having been instructed—exterted among the population—the women and the babies.

In 1900, the German Empire lost 426,485 infants under a year old. That means 27.5 per cent. of those born alive. Of these, 61,340 are reported to have died of congenital debility. What is this debility? How did it occur? Something has caused it during embryonic and fetal life. A disease of the embryo or fetus. Infection through the placenta; starvation of the mother by poverty; overwork in a factory; poisoning by a chemical; prolonged labor; unattended labor; unskilled attendance, and some of the other causes I am going to mention.

Whatever among these influences can be avoided or cured saves infant life. It is our duty to look for the causes of debility and death in order

to escape from them. We have spent more care on the health and efficiency of the cow and her milk than of the mother and her milk. No doubt the efforts to improve the chemistry and physics of cow's milk, and the beneficent activity of medical and lay milk commissions have borne fruit, and the safeguarding of milk by sterilization, pasteurization and modification has saved lives, but we must look for a higher percentage of salvation. That can be reached, for even the average mortality of a single, mostly poor, country—Norway—has reached as low a standard as 8 per cent. under one year. Wherever financial circumstances are more favorable that should not be the lowest percentage.

What, after all, is a midwife, whose presence at or attendance on a confinement case must be shunned? An editorial of the *Boston Medical and Surgical Journal*, that cautious and elegant magazine, gives the following definition:

> The midwife may be defined as a person attempting to practice obstetrics without complete or even adequate medical education. The tolerance of such persons is an anomaly in an enlightened civilization. The midwife is a relic of medievalism, unhappily extant in the Old World, but whose persistence in our own community should not be encouraged by any form of recognition.

Meanwhile, Holland, Belgium, France, Italy, require a two years' course of schooling for their midwives; Norway, Sweden and Denmark, one year. Germany has had its midwifery schools for more than a century. Many countries subsidize their midwives, who live and practice in sparsely settled districts. Great Britain established in 1902 its Central Midwives Board, to supervise and control midwives for the specified purpose of preventing the death of women in childbirth, infant mortality, blindness, and physical degeneration.

There are in England and Wales 17,790 trained and untrained midwives—too many yet of the latter class. The British Empire's 108 midwifery schools—including four in the East Indies and one in Hong Kong—have not yet afforded sufficient facilities. But the *British Medical Journal* emphasizes the fact that even in the old type of midwives there is a great improvement in cleanliness and obedience to rules, one of which is the calling in of medical aid in cases with a purulent discharge.

And we? Fifty per cent. of all the births in the United States are attended by non-medical women—in New York, 42; Buffalo, 50; St. Louis, 75; Chicago, 86. The patients so attended are negroes, aliens, and natives born of aliens; that means one-half of our population; that means those who during the disappearance—voluntary, wanton or not—of the original stock and by additional immigration and multiplication will form what within two generations will be the type of the two hundred millions of Americans then living. And where are our midwives? Where are the

108 schools which little Great Britain deems—on account of their scant number—insufficient for her urgent needs? Where are the American safeguards of our fetuses and new-born? When our experienced and far-seeing president of Bellevue and Allied Hospitals established a small school of midwifery, he was applauded for his exceptional foresight and altruism. We think nowadays that the ocean is only a short bridge; but the experiences of Europe, established on a solid and constant foundation, do not travel on it. That is the way of indolence by which we negligently murder our forests, lay dry our river beds, cause our freshets, and kill or cripple our newly born. I wonder in which other country we could be born. I wonder in which other country we could be expected to accept what I lately read, that people cannot receive obstetrical service under the midwife, "no matter how well trained for her vocation;"—I ask why not?—or agree with a well-meaning author who sympathetically cries out: "Professors are teaching midwives, so medical students are deprived of their professors' time;" or throw up our hands when Stokel tells us that it is "a curious fact that even among people of refinement the older and dirtier the midwife, the greater seemed the confidence placed in her ability and judgment." That is as sound, perhaps, as when the great English opsonin scientist publicly arraigns habitual bathing for its dangerous effect in admitting microbes through the clean skin—a desirable bedfellow he!—or when Knott tells us that "Lady Lawson, who died at the age of 116, never practiced ablution of any kind, or hardly in any degree, because as she alleged, those persons who washed themselves were always taking cold or laying the foundation of some dreadful disorder," or the occasional preference given to an old doctor not though but because he is habitually intoxicated. There is still another line of mistaken altruism: Fenwick fears lest a midwife, scantily trained, compete with a physician. I should say, if she succeeds, it serves him right unless he own a superior training. A pretty good doctor will not do for you or your wives or cases, any more than a pretty good egg for your breakfast.

Is there anybody here who remembers that when fifty years ago the question of the licensing of midwives was brought up before the Medical Society of the County of New York, it was voted down with all con except one? Ask our New York doctors at present. We know better now, and feel better about it. For we feel like citizens at present. We have also been told that all countries have found "the practice of midwives unsatisfactory." The fact is, however, that the other countries pretend to know their own business, and constantly add to the facilities and education of midwives as we do those of doctors. Some assert also that the attendant on a midwifery case must either be a trained obstetrician or a subordinate "like our excellent trained obstetrical nurse." "The obstetricians are the final authority to set the standard. They alone can

properly educate the medical profession, the legislators, and the public." Who educated *them* if you please, if not the professional schools, and they themselves as best they could afterwards? The midwives are not even mentioned as worthy to be educated. Do our obstetricians demand all the obstetric practice? I am prepared to bid a hearty welcome to the evening-dress obstetrician—who charges $200 or $300 or $500 a job—to the confinement where the man earns ten or fifteen dollars a week, or the woman thirty-cents a dozen, and the children nothing.

In spite of English complaints concerning the insufficiency of midwifery attendance, the reports are very promising. In 1910 there were 321 midwives in Liverpool, 198 in Birmingham, 159 in Manchester. In Liverpool, the average number of cases per midwife was seventy—one had 500 cases. Of all the births attended to there were by midwives in Liverpool, 71.9 per cent.; in Birmingham, 63.2 per cent.; in Manchester, 57.2 per cent. Still-births attended by midwives were 391 in Liverpool, 212 in Birmingham, 279 in Manchester. Their honest discipline is exhibited in the following figures: Medical assistance was called by 1,015 midwives in Liverpool, by 674 in Birmingham, and 2,279 in Manchester. The indications for such calls, under the universal rule, are high temperatures, abortion, laceration, illness of the patient, imperfect removal of the placenta, puffiness, convulsions, large varicose veins, sores on genitalia, malposition, trauma, hemorrhage, venereal diseases.

This very day the system under which they work with us is an absolute lack of system, slovenly and shiftless—no instruction is offered, no examination demanded, no supervision enforced, and the babies swell the universal mortality.

What is it that a midwife should be taught? Common sense and the experience of other countries should tell us, for we have none—I mean experience. We are only told that she is dirty, ignorant, untrained, superstitious, septic, the cause of invalidism, degeneracy and blindness. That is a list of statements exhibiting more temper than knowledge. For, indeed, in thirty-three of the fifty states and territories there is no law restraining the practice of midwifery or what is so called. In three there is no restriction whatsoever. In thirteen there is no provision for training, but there are, curiously enough, laws requiring examination and licensure. What is it, after all, that every one of our states—indeed, after a while, the federal government—should demand on the part of a midwife who is to be the obstetric guide of fifty millions of Americans? In my opinion, she must have as moral a character as you expect in a male or female student of medicine or man generally—and, for that matter, of any American outside a penitentiary; a good common school education without Latin and Greek; a fair health so as to endure the hard work she means to undergo in future; a reputation for love of work and conscientiousness; and such knowledge of popular physiology and anat-

omy as the program of our future midwifery schools will designate. What they must surely teach, like the English schools, are four topics—the *care of expectant women, the conduct of normal labor, the care of babies immediately after birth, the simple principles in an urgent case of artificial feeding*—and the diagnosis of abnormalities, so as to advise the calling in of medical skill. As there are many, I shall spend a few minutes on the consideration of some of them.

The fact is, that of one hundred deaths under a year, 2.2 occur by injuries during birth, ten on the first day of life, twenty-five during the first two weeks, thirty-four during the first four weeks. Most of them should be saved through perfected knowledge and art, more skillful attendance than half our population enjoys, and greater acquaintance with the dangers of the newly born. You notice that a large number die from other than the usual causes, viz., indigestion.

A calamity never prevented by one of us, possibly by an attentive and painstaking nurse or midwife, is death by suffocation.

There were in England and Wales during ten years, 10,009 *overlain* infants; in 1900, 1,774. In Liverpool, out of 960 inquests, there were 143 babies that had died of suffocation from the same causes, by accident or malice; in London in 1900, 615; in 1901, 511; in 1902, 588. In London, they had annually 8,000 official inquests, one out of fourteen of which were on overlain infants. A serious complication of labor is *asphyxia*. It may be caused by the mother or by the fetus. Disorders of placental circulation, mostly toward the end of labor, early loss of amniotic fluid, respiratory and cardiac disorders, disruption of the placenta, compression of the cord and cerebral pressure can mostly be prevented or moderated by appropriate aid. Asphyxiated babies may die, however, within an hour, or the first few days. Those who do not so die are apt to be worse off. They are very liable to become paralytic, idiotic or epileptic. Little shares that opinion, the contrary assertions of others notwithstanding, that a large percentage of cases of spastic encephalitis ("Little's disease") is produced by congenital asphyxia. Hundreds of times, both in obstetric and in pediatric practice, have I, when looking for etiologic factors, received the uniform answer that the baby did not cry for some time after birth, and that the attendant had to work over it minutes, or even hours. Asphyxia must not be tolerated. A few moments' delay adds to the danger which may be averted by knowledge and skill. Losing a baby is a loss and bereavement; crippling it for life is worse. Accidents of the kind can be avoided by much less than the profound knowledge of medical experts, few of whom will ever deign to attend a mere case of common confinement. The statement on a certificate that the newborn is a still-birth means a statistical fact, not an explanation, still less an excuse.

Atelectasis is more apt to be relieved, and death from it more readily

prevented, by a midwife than by one of us, no matter by what it is caused. Soft cartilages in the premature, feeble muscles, defective nerve centers and lungs, but mainly hepatization, early pleural effusion, struma and compression of the brain are the usual causes. Frequent changes of position, warm and cold baths, shaking, forced inspiration, occasional closure of mouth and nose—so as to fill the medulla oblongata with an extra momentary dose of irritating carbon dioxide—an interrupted momentary Faraday stimulation and all the procedures demanded in asphyxia are advisable in atelectasis. A midwife should and can master all or most of these measures, as well as a doctor. The former is more efficient because she mostly uses more diligence and will spend more time than most of us.

The observing obstetrician or pediatrist or midwife has an opportunity to notice all sorts of microbic infections, such as tetanus, hemorrhages and the intense forms of syphilis. Its worst form is the pemphigus of the soles of the feet, which must be recognized within a few days. The midwife is the readiest to make the diagnosis, and to recognize the necessity of treatment. That does not mean *her* treatment, just as little as she will undertake the treatment of melena, sclerema, jaundice, sepsis, dermatoses, erysipelas, traumata or umbilical defects or diseases.

Some of the septic diseases of the newly born for the cure of which the doctor is always too late, or incompetent, are those which go by the name of Buhl, of Winckel, etc. They develop before any symptom is perceptible. The poisons which cause them are probably multiple and connected with the rapid metabolism occuring during, and immediately after labor. Many cases look like acute atrophy of the liver, or pernicious vomiting; or the main symptom is fatty degeneration, or hemorrhage, or intense jaundice. Overdoses of chloroform in predisposed women have been accused. Intense asphyxia I have seen coupled with, or causing it. There are many such cases which can be prevented by appropriate and instant aid, such as I plead for. Many, I believe, will be cured by vaccine therapy, provided it can be employed in time. That is possible only when the indication for it is suggested, or only suspected by a person who is on the spot and better taught than a common neighbor or nurse.

The *mouth* of the newly born is exposed to injury resulting from the antediluvian tendency of not leaving well enough alone. The habit of washing and rubbing the oral cavity of the newly born, even by clean fingers and rags, hurts the very thin mucous membrane covering the posterior part of the alveoli, and the punctated epithelial accumulations on both sides of the raphe. Doctors and nurses and midwives who do not know how to omit interference are dangerous. For the forcible removal of the empithelium leads to invasion of cocci and bacilli, and the mycelium of *thrush*. The latter, though easily cured by a strong solution

of borax in glycerin, need not occur in the baby's mouth, for its habitat in the vagina of the mother is quite accessible, both in a private home and in the obstetrical wards and in foundling institutions. A consecutive invasion of the stomach and intestines, of blood-vessels and lymph ducts, even of the kidneys and nerve-centers, may easily be avoided by a person who has been taught to prevent and to cure.

Constipation of the newly born should be recognized by the midwife. What I described nearly half a century ago as *congenital constipation* is the result of an excessive length of the sigmoid flexure. When its continuance for one or two days suggests it, enemata should empty the bowels. Unless that be done, moderate and later on serious costiveness is an accompaniment of the dilatation of the descending colon, and auto-intoxication. "Hirschsprung's disease" is rarely a fully developed congenital dilatation. If a midwife be too alert she is capable of preventing an operative interference. I was one of the alert midwives. None of my cases ever terminated on an operative table.

Ophthalmia is the source, not only of blindness, but of death through general septicopyemia under the general symptoms of multiple abscesses and arthritis. A series of cases I, like others, have observed, of vulvo-vaginitis, endometritis and peritonitis. That endometritis is always of long duration, may for anatomic reasons relapse indefinitely for many months and years, and often gives rise to contagious dissemination in families, in hospitals and asylum wards, by careless nurses and by gregarious bathing.

Uric acid infarction of the baby is a frequent occurrence of the second day until the end of the first week. It is rarely observed by the doctor (if any was employed) who sees the new mother perhaps once a day, if at all. Thus in this respect the well-to-do mother is worse off than the poor who is seen by a midwife whose visits are more frequent and more extended.

The tissues of the newly born contain more water than those of the adult; the difference amounts to 10 per cent. *Loss of water* is badly tolerated, while large quantities are eliminated at once through the lungs, kidneys and skin, and some through the intestines. Without a proper supply, the tissues deteriorate and the physiologic equilibrium is lost. That was always so—the newly born is conservative—and was considered normal. The baby had to be satisfied with reading in every textbook—even in the old ones from which some new ones are compiled—that he has to please the attending oracles by giving up 10 or 20 per cent. of his weight within a week or two. However, as the mother has but little milk during the first days, the least the baby should have a right to expect is water—at least teleology ordains it so—the more so as the first mammary secretion means colostrum, which contains three or four times as much protein as the milk of later weeks—that means 3 or

4 per cent. That is mainly so—even still more so—when the baby is premature and endowed with less vitality than when born at full term. Neither you nor I shall undertake to change that, but the danger connected with it requires correction, and if artificial feeding be resorted to at all the food should be amply diluted. There is another reason for so doing. Uric acid sediments and renal stones are comparatively frequent in small infants. They are caused by the uric acid infarctions which, as a speedy result of the rapidly changing metabolism, are found in the diapers on and after the second day of life. Besides forming gravel and calculi, they give rise to occasional attacks of colic, to small hemorrhages and frequent cases of nephritis, with, or mostly without pyelitis. Neither I nor my pupils and friends have seen so many stones and inflammations since, for the last forty years, we made it our rule to feed the newly born on plenty of water. It is also demanded for the purpose of rendering the chemical and physical condition of cow's milk casein more digestible. As long as a human baby is not permitted to live on its mother, that fact is important to consider. Artificial feeding during the first days and weeks should furnish more than 75 or 85 per cent. of water, which is normal even for the adult. Altogether, our infants and children are not supplied with water in sufficient quantity at any time. In our era of equality for all sexes and colors, we should recognize the rights of all ages.

When you are hungry, you want to eat; when thirsty, you drink. The baby wants its equal rights. But no matter whether it is hungry or thirsty, it is condemned to receive the same food to quench both its hunger and its thirst. When it cries with hunger, it justly receives food from the bottle or breast; when it cries with thirst, it is given the same food from the same bottle—not mere water. I have often felt like presenting a bill to the legislature or to the professional philanthropist, enforcing, when father, mother and physician are thirsty, beefsteak and potatoes. I wonder how they would like that. A German pediatrist improves the method of giving water by giving the new-born tea and saccharin. What tea is, I do not know; what saccharin is, we do know. It is found to be a poison. That should, however, not have been the reason why our magnanimous Agriculture and Treasury Departments twice postponed the execution of the law which forbids its indiscriminate sale by the manufacturers of foods.

Midwives are more fortunate then we doctors. They need not know so much as a few taskmasters ask of them—for instance, two German professors, Salge and Siegert, who are so interested in the babies as to insist on midwives being examined on the intricate problems of metabolism. I fear, after having been a midwife sixty years ago and since, I could not pass to-day. Then, they need not know all the mixtures and mathematical formulas concocted by twenty of my pediatrist friends,

each one of whom is sure that the other nineteen are quite wrong. Nor need they be acquainted with the fifty artificial foods which were recommended by the *Deutsche medizinische Wochenschrift* a short time ago, and again rejected—all of them—in the very same year.

The teaching of midwives is not so difficult as part of our profession imagines it to be. We are defective ourselves, for there is a fact which seems to be agreed on by our college teachers, viz., that our young doctors are incompetent to conduct a normal or abnormal labor. As that is so, we, the practitioners, should try to learn some lessons by theory but more by practice. Their incompetence is the result of the insufficiency of our medical school instruction, which is acknowledged to have been scanty in spite of our four years' medical courses. The schools furnish neither systematic obstetricians nor competent general practitioners. I shall not be hard on them, however, for I was a teacher myself. That is why the number of septic infections and of still-births is liable to be large in their practice. If that occur in the green tree—viz., among the men and women with medical diplomas—what can we expect from the untutored?

We speak against midwives and their detrimental doing and their unreliability. Teach them their duties, which are not many; furnish bedside instruction—which even for a hundred thousand physicians is scanty or none—so that they will learn the manual care of labor; let them be taught not to use medicines, not to operate, not to try even to remedy, as a rule, wrong fetal positions; teach them the use of soap and water, and antiseptics; enforce by law and custom the frequent change of their own clothing; forbid the simultaneous attendance on two or more cases; see that the midwife does not attend a labor case as long as in her family or immediate neighborhood there is a case of contagious disease, and she will cause or disseminate no puerperal sepsis. She must be examined and licensed and protected, like you and me.

Registration alone, however, will not do. Nor will our complaints do. Our responsibility does not cease when we decline it. Our duty does not end by sending and collecting a bill for an individual medical service. A death not prevented, a life not saved, is a blot on our escutcheon. The people want more. We are not yet—as the British government proposes—official state employees of the people. If there were not an excess of individualism among us, the attempt to force socialistic coercion on the profession of England would not have been made. Not yet.

Less than a year ago, the New York Academy of Medicine passed, among others, the following resolution:

Whereas, some of the results of obstetrical malpractice are unnecessary blindness, mental and physical degeneracy, and death of infants, and unnecessary suffering, invalidism, and death of mothers; and whereas both doctors and

nurses in this country are given instruction in the treatment and care of child-bearing women and new-born infants, there is no existing provision for the adequate training of women who take into their keeping the lives and future well-being of this large number of both mothers and infants, be it resolved that the Section of Obstetrics and Gynecology of the New York Academy of Medicine recommends that measures be taken in the state to secure state legislation which shall provide for the training, registration, licensure, supervision, regulation, and control of women engaged in the practice of midwifery.

It is useless to attempt a comparison of a midwife with a medical man. They must be considered individually. The ignorant doctor in obstetric work is the inferior of a well-informed midwife, and *vice versa*. I remember only two cases of sudden death caused by atmospheric air entering a large uterine vein—in both instances resulting from the nozzle of a fountain syringe introduced into the uterus before the air had all been expelled. In both cases it was a medical colleague that did it. That does not prove that we doctors do not know how to clean a uterus without pumping air into a vein—but I know of no midwife that could have done worse. Still, ignorance, like sinfulness, makes all mankind kin. The greater number of annual labor cases in the United States—more than a million—are attended by midwives. As long as these cases are uncomplicated, the presence of a bright trained woman should be, and is, welcome. She must have learned to distinguish the position of the fetus, and know when to call a doctor; how to do, in his absence, a version in cases of emergency; how to attend the eyes; hemorrhages depending on incomplete uterine contraction or from injuries—one of which is tearing off of the placenta—and how to recognize eclampsia, inversion of the uterus, the presence of a mechanical obstacle like fibroma or a contracted pelvis. She must know how to deal with asphyxia. More than anything, she must have been taught to appreciate two things: first, how to keep absolutely clean—that means to disinfect herself and her hands; second—and therein lies a secret of success—not to leave the woman. That is more than you or I do, or usually did.

The results of midwife practice do not always compare unfavorably with those of our professional brethren: Of 116 cases of ophthalmia neonatorum which were treated in the Massachusetts Eye and Ear Infirmary in one year, 114 were in infants attended by physicians, and two by midwives. Of thirty-three cases treated in the New York Eye and Ear Infirmary in one winter, twenty-two occurred in the practice of physicians, and eleven in that of midwives. Of the eleven midwives, three had used nitrate of silver; of the twenty-two doctors, only one. According to these reports, if it were wise and proper to generalize, the doctors should by replaced by midwives.

In a period of years, 1905–1910, the City of Manchester, England, has

the following to say about puerperal fevers, and recoveries and deaths following them, in the practice of midwives and of doctors. In the practice of midwives there were 219 cases of puerperal fever, with forty-one deaths; in the practice of doctors, 275 with eighty deaths; in the cases attended by midwives and doctor, 100, with twenty-six deaths.

Nor are midwives' cases, those reported in 1910, inferior in results—forty-five puerperal fevers were treated at home with a mortality of ten = 22.2 per cent.; in Monsell Hospital, sixty-six cases with sixteen deaths = 24.2 per cent.; in other institutions, twenty cases with five deaths = 25 per cent.

The absence of skilled assistance from a confinement is one of the causes, not only of death, but of what is still worse, of degeneracy of the new-born. How many, nobody can tell. But it is worth while to reduce the number of 60,000 weak-minded or mental degenerates with which we are credited in the state of New York alone. The statement on a birth certificate that the new-born is a still-birth means a fact, not an explanation, still less an excuse. Many of them could be avoided if the women of the United States were protected against ignorance and indolence. When I was in active obstetric practice fifty years ago, I met in the tenement-house population many a case, which should have been saved if any bystander had known enough to afford manual assistance, such as that of a well-informed midwife. That however, is only a part of the possible mishaps. What proper assistance may prevent is a vast number of paralytic, spastic, idiotic, semi-idiotic or epileptic conditions, mostly during infancy and childhood. How many? I do not know. But I have seen hundreds personally. Questions were as follows: How was that baby born? Did it take long? How long? Was it an instrumental case? Did the baby cry immediately? Was anybody present to help you? Did it take the doctor, who was called in, long, a minute, ten minutes, or one-half of an hour to make the baby cry? The answer gives the history of asphyxia, which—and that is my point—could have been prevented, or relieved, at once by a midwife. I hope there are many general practitioners here, such as I am or have been. They know how much they would have wished to be present on the spot, or to have a midwife to attend when they did not care to attend or could not do so. How many cases might have been carried to a safe end, when a little aid would have prevented intracranial hemorrhage caused either by direct lesion or thrombosis, can be surmised only when you remember the many patients with meningical hemorrhage or inflammation who die within a week.

Now my friends, you have been kind to me and patient, as hundreds of times before. That is why I shall now finish in a minute with a few conclusions for those who with me are convinced that healthy women and living vigorous infants are the best possessions of this nation. They

will not be conquered with treasures and cannon and corpses of countless men; they need conservation only. What I want is that a pregnant woman should be in a condition to carry her fetus to its legitimate end in health and vigor, and be able to nurse her infant. Every text-book talks to us of the inability of women to do so, and indicates formulas and tradeshops and factories from which to graduate toothless young Americans. One hundred per cent. of our women, however, can be made to nurse, even the "flower and fashion" of the land. From two to three times as many babies will live when breast-fed compared with the number of those whom they complacently try to raise on artificial foods. By breast-feeding you will save 100,000 babies that now die or become invalids, from no other cause but unnatural feeding.

Dangers which now attend the process of parturition for more than one-half of the women of this country must be modified, relieved or removed by the presence of a person instructed to conduct a normal labor and, when needed, to call timely aid. We want, for the benefit of the women who need midwives, 200 midwifery schools after English or German pattern. Let no legislature of any state pass without a bill or law to safeguard the newcomers and their mothers.

A town without an ample supply of good doctors and midwives and a village without one or two competent and responsible and licensed midwives, are like a tenement house without a fire-escape or a *Titanic* without life-boats.

14. *Lessons for Midwives*

I

The purpose of these lessons is to give in a simple way those things which the midwife most needs to know. They are designed to show the necessity for the most thorough cleanliness; what the midwife should tell the mother as to how she should live before the baby is born; what articles the midwife needs to take with her and how to use these articles; what labor is and how to recognize some of the dangerous occurrences; how to take care of the mother after the baby is born, and finally, how to take care of the baby.

Let us begin by explaining three things that the law requires of the midwife; unless she attends to all three of these things she is liable to arrest and imprisonment. The law requires (1), that the midwife must register with the local registrar; (2), that she must put a drop of silver nitrate solution (1%) in each of the baby's eyes soon after it is born; (3), that she must report the baby's birth within ten days (see that the baby has a birth registration number).

The midwife must always take every opportunity to keep in close touch with the doctor and nurse in her neighborhood. She should call in the doctor if anything seems different than usual and should always follow his advice and suggestions closely.

The most important lesson is cleanliness; the midwife should not only have clean hands and clean clothes on the day of confinement, but she should make a practice of keeping her body, hair, hands and clothes clean at all times. Most of the child-bed fevers are caused by germs that grow in dirt. If the midwife is very clean, keeps her clothing clean (or at least wears a clean apron), scrubs her hands well and will also see that the mother and the bed are clean, few mothers will die in child-bed.

II

Before a mother gives birth to her baby she is said to be pregnant. A pregnant woman must be taught that the baby is only well born if the

Source: *Lessons for Midwives*, Georgia State Board of Health, Child Hygiene Publication No. 17, Prenatal Series No. 3 [1922]. Reprinted by permission of the Georgia Department of Human Resources.

mother is in good condition before the baby comes. The midwife must explain to her that she must pay especial attention to—

1. Diet—Her food should be plain and nourishing; at least a quart of milk, cereals, fruit, green vegetables, bread and butter, eggs, and a little meat every day, with at least six to eight glasses of water.
2. Bowels—On the above diet the bowels should move easily every day; if they do not a doctor should be consulted.
3. Skin—A warm bath should be taken three times a week to keep the skin clean.
4. Kidneys—Urine should be examined by a doctor once a month; the kidneys sometimes become affected, but even in that case if proper care is taken the patient will not die.
5. Nausea and Vomiting—From the 6th to the 12th week nausea and vomiting are common; this is called "morning sickness"; if it is very severe or lasts longer than 12 weeks the doctor should be consulted.
6. Breasts—These should be washed every day and the nipples kept soft with clean vaseline or mentholatum. If these are cracked a doctor should be consulted.
7. Discharge—If there is much discharge from the birth canal the doctor should be consulted.
8. Clothing—Clothing must be as warm as necessary but of a loose, light weight; it should not be tight over the breast nor the waist, and round garters should not be worn.

Varicose veins (milk leg) may be relieved by lying on the back and raising the legs so that the feet are higher than the head.

The danger signals of pregnancy are severe vomiting, headache, swelling under the eyes and of the feet, dizziness and bleeding. These symptoms mean usually that the kidneys are not working right or that there is some harmful condition in the womb. In either case they are signs that show the mother is in grave danger of losing her life. A doctor must be called.

III

The midwife is to see that the patient is supplied with the following:

1. One newspaper pad made as follows: Take twelve full-size sheets of newspaper, sew them together and cover with clean white cloth; if possible put a layer of cotton between the sheets.
2. Three dozen pads ten inches long and four inches wide made of clean white cloth or cheese cloth with a thick layer of cotton between.
3. A package of ten hand towels; package covered by another towel.

(All of these things may be made from one pound of absorbent cotton, two rolls of cotton batting and ten yards of old white cloth or cheese cloth.)

To sterilize the above, and also the nightgown and white stockings which are needed, use a washboiler with about six inches of water in the bottom. Pin each end of a towel to the handles of the washboiler, thus making a shelf upon which the various articles are placed. The small articles are to be placed in a pillow case first. Put the cover back on the washboiler so that it fits very snugly and no steam can escape. Then set the boiler on the stove and let steam for two hours. Remove at the end of that time and spread out on clean place to dry. The reason for sterilizing the goods is to prevent the growth of bacteria (the same reason as that for sterilizing fruit jars in canning).

In addition the midwife should see that the patient possesses the following:

1. Two or three nightgowns.
2. One pair of long white stockings.
3. One and one-half yards of rubber sheeting (white oil cloth will do).
4. Two papers of safety pins.
5. Three hand basins.
6. Two pitchers.
7. One slop jar.

The next lesson will tell what supplies the midwife must have.

IV

The midwife must have a bag in which are all her necessities, always sterile and always ready for immediate use. In this bag must be a clean, sterile apron. (It is much better if the midwife will have a special white gown.) The bag must contain all that the midwife needs, but must not contain any unnecessary articles. In addition to the clean, white, sterile apron (or gown) there must be—

1. Castile soap.
2. A bottle of lysol.
3. One tube vaseline.
4. One new nail brush.
5. One fountain syringe.
6. One hot water bottle.
7. One bedpan.

8. Several pieces of narrow white tape nine inches long; these in a small sterile package.
9. A container of 1% silver nitrate.

When the midwife gets to the patient's house and she has taken care of arranging the room, etc., she should give her hands a thorough scrubbing with hot water and soap and finish up by washing them thoroughly with the lysol solution. (1 teaspoonful of lysol in a quart of water.) After she has washed her hands she is ready to prepare the patient.

Preparation of the Patient

1. When the patient is really in labor (the signs of labor will be explained in the next lesson) the first thing that the midwife is to do is to give the patient an enema. To do this she fills the douche bag with two quarts of warm soap water; she greases the tip with vaseline; then she hangs the bag on a nail slightly above the height of the bed; the patient lies flat on her back with the douche pan under her buttocks; the midwife inserts the tip into the anus and allows the water to flow; this continues until the patient can no longer contain the water; the tip is then removed and the bowels emptied; the same procedure is gone through until the bag is emptied, the patient each time making an effort to hold the water as long as possible.
2. The next step is to clip as closely as possible the hair from the surrounding parts; this should be clipped very closely and then shaved off.
3. Then the parts are to be scrubbed gently, but thoroughly, with soap and warm water, followed with a lysol solution. (This solution is made by adding one teaspoonful of lysol to one quart of water.)

The patient is ready for delivery as soon as the rubber sheeting has been put under the bed sheet and the large newpaper pad on top of the sheet; the various articles are placed on a table or chair in a convenient place where they are not likely to be touched by anyone except the midwife. The midwife again scrubs her hands thoroughly, rinses them in the lysol solution and is ready for the delivery.

V

At the end of forty weeks the child is fully developed; the womb has become thickened and its muscles very strong and the child is ready to be born. But before the child can be born the opening of the womb, which is ordinarily closed, must get thinned out and stretch open; this takes some time and is accompanied by some pain. Usually for a few days before confinement the mother will notice backache and an increase of the discharge from the birth canal. The pains themselves are irregular

and rather short; they may come for a few hours at a time and then stop altogether, or they may occur irregularly during the day or sometimes only at night. But when labor really begins the pains become more regular and gradually closer together until cramps come every thirty to ten minutes at first, and the midwife can feel the muscles of the mother's abdomen becoming very hard and firm with each pain.

The bag of water breaks without paining the mother; she feels just a warm gush; the patient must be taught to call the attendant as soon as she notices a bloody discharge, any severe backache or when the bag of water breaks.

If the child is in the usual position, the next thing that the midwife will notice is the head of the child presenting in the birth canal. She must not in an effort to make the birth quicker, press her hands against the mother's abdomen. She must rather place her hand gently but firmly against the baby's head so that it is not born too quickly, since when the baby is born too quickly it may result in bad tears of the mother. The head is born and it is soon followed by the baby's shoulders and body. The baby should be held up so it may be seen whether it is breathing or not; if it is not breathing the midwife pats it on the back, slaps it with a wet towel, rubs its throat gently from the chest up to the chin (to rid throat of mucus) and does not stop in her efforts until the baby begins to breathe or its heart has stopped beating for 10 minutes; then its mouth and eyes are wiped with a piece of clean sterile white cloth and it is placed on its back and one drop of the silver nitrate is placed in each eye. It is then wiped off with sterile olive oil (or vaseline) and placed on its abdomen until no pulse can be felt in the cord. This will take at least 15 minutes; the cord is then tied off with a piece of the sterile tape and the cord is cut. The cord is tied in two places and the cut is made between these places; there should be at least an inch and a half of the cord left after it is cut. Boric acid powder is sprinkled over the cut end of the cord and a small square of three or four layers of sterile cloth are tied in position over the end. The baby is then wrapped in a clean blanket and placed in its bed, which is out of the way.

The delivery of the after birth will be discussed in the next lesson.

VI

The after birth usually is born within 30 minutes after the baby is born. The midwife must make no pressure on the abdomen to hasten this, as she may start a severe hemorrhage. It is better to wait, no matter how long it takes for the after birth to come. After this is born the midwife cleanses very gently the surrounding parts with a piece of sterile cloth and warm water, being very careful not to touch the en-

trance of the birth canal nor the birth canal itself. The midwife places a pad between the patient's thighs, removes the newspaper pad and straightens out the bed; the patient is usually made more comfortable if her face is bathed with cool water and she is given a cup of tea. The patient needs rest above everything else and should therefore be left alone and the room made quiet; if the birth has occurred in the daytime the room should be darkened. The following are things that the midwife must remember:

1. She must not pass her fingers or an instrument up the birth canal of the patient for any purpose whatever at any time during pregnancy or labor, nor may she give an injection into the birth canal.
2. A midwife must not give drugs to hasten labor or for any other purpose than to serve as a gentle laxative.
3. If the baby is not born within 24 hours she must secure a physician.
4. If the body of the child is born first it should be supported on the right forearm and if the head is not born in a few seconds the child should be held up by the feet and gently pulled, because unless it is born in a short time it will smother.
5. If the child's hand comes down send for a doctor right away; it is in a cross position and it cannot be born alone.
6. If the mother has a spasm or bleeds before or after the child is born, or is very weak, the doctor should be called; also if the mother seems feverish send for the doctor immediately, as she is in danger of dying in child-bed in all of these conditions.

After care of the mother will be described in the next lesson.

VII

No mother should leave her bed before the ninth day. She may sit up a little while in bed by the sixth or seventh day if she feels well enough. On the ninth day she may sit up for a little while in a comfortable chair next to the bed if she does not get dizzy. On the twelfth day she may take a few steps around the room, but she must not climb stairs before the end of three weeks. She must do only the lightest kind of housework before an additional three weeks are up. The midwife must see that these directions are carried out. A great many "female troubles" date from this time because the mother has not had sufficient time to rest after the child has been born.

There should be frequent changes of the vulval pad—at least three times a day. The discharge should gradually change from red to brown and then to white. The patient should have a sponge bath daily, warm soap water with gentle scrubbing. An abdominal binder and a breast

binder should be used only for unusual conditions and a doctor should advise these before the midwife uses them.

Two or three days after the birth of the baby the breasts begin to fill with milk. The baby should be put to the breast six hours after birth and from then on every six hours until the milk comes. The nipples must be kept clean; before and after each nursing they should be washed with a boric acid solution. The mother should have a generous diet, including at least a quart of milk per day. Ninety-five to 100 per cent of mothers can nurse their babies, so if the milk is scanty or the baby does not increase in weight, keep on trying, but see a doctor. Sometimes a mother is nervous, tired out and so gives little milk. She must learn to lie down while nursing the baby; breast milk is the only food for a baby and the mother must be taught that the life of her child may depend upon whether it is getting breast milk or not. In any case, if the baby must be taken off the breast the doctor must do this. Don't put the baby on any kind of artificial food or even on cow's milk without doing so by the doctor's orders. "An artificially fed baby is a sick baby."

VIII

The midwife should give the following list to the mother so that she may prepare proper clothing for the baby. The garments must be warm but not heavy; they should fit loosely and be simply made.

A square of flannel.

4 strips of soft flannel, 8" × 16".

4 shirts of cotton and wool mixture.

2 pairs of stockings.

4 outing flannel petticoats buttoning on shoulders.

4 slips.

4 outing flannel nightgowns.

12 or 14 diapers (18 inches square) made of birdseye.

The diaper must be adjusted so that the pins come over either thigh and not over the front of the abdomen, as is the case with diapers where the end is pulled tightly up into the crotch.

The nursery equipment may be an old clean blanket, safety pins, soft old towels and clean soft pieces of old white tablecloths, etc., for wash cloths; hot water bottle with cover, talcum powder, olive oil and castile soap. A large clothes basket with a small hair mattress covered with a small piece of oil cloth, on which is a piece of outing flannel, and plenty of warm but light cover. The midwife must insist that the baby sleep by itself.

The midwife must wipe the baby's eyes daily with a clean piece of cloth which has been dipped in boric acid solution. If possible the cord dressing should be changed only once before the stump falls off. It is very important to keep the stump free from germs; the germs that enter here come because the dressing is dirty or has been moved by soiled hands; these germs usually result in the death of the baby. If the baby has a discharge from the eyes, or if a girl, from the vagina, a doctor should be consulted immediately. In warm weather the baby may receive its first bath the day after it is born. The water must be very warm (body temperature). For young infants it is better for the attendant to place a large turkish towel on her lap, undress the baby and give him a gentle warm soap scrubbing (use mild soap), rinse him off gently, and pat rather than rub him dry; then powder with a smooth, mild talcum powder. Apply the binder firmly but not tightly, being careful that the cord dressing is not disturbed and that there are no wrinkles in it. The baby is put to the breast every six hours for the first day or two and then is put on a three or four-hour schedule as follows:

6 A.M., 9 A.M., 12, 3 P.M., 6 P.M., 10 P.M., or 6 A.M., 10 A.M., 2 P.M., 6 P.M., 10 P.M., One night feeding may be given. The baby is to be given a little cool, boiled water to drink every few hours. A healthy baby cries only when it is hungry or uncomfortable because of wet or tight clothing, etc. It is never too early to hold the baby to a very definite schedule; the baby is never too young to be spoiled; teach the mother that she will avoid a great deal of work, nervousness and unhappiness and will have a healthy normal baby only if she sticks closely to the rules you have taught her.

15. *Maternal Mortality and Mortality in the First Month of Life in Relation to Attendant at Birth*

Julius Levy

It has been pointed out in publications by the Children's Bureau, several reports of special committees and personal papers, that the maternal mortality in the United States is alarmingly high, that it is apparently the second highest of a large number of countries according to available statistics and that even if correction were made for differences in accuracy of reporting, the United States would still occupy an unenviable position.

Students of Public Welfare have been particularly impressed with the fact that in the past twenty-five years there has not been any noticeable decrease in this mortality; indeed, in many states and most cities there has been recently an actual increase.

A similar situation exists in relation to the mortality of the first month of life. In spite of all the advancement in living standards, in educational qualifications for practitioners of medicine, in social and economic adjustments, in organized preventive medicine through non-official and official bodies, we are confronted with the fact that the mortality of the first month has been affected but slightly, while the mortality under one year and over one month has shown reductions of fifty per cent in the past ten years in many cities and states.

The purpose of this paper is to consider certain data that may present additional facts for a discussion of the cause of this mortality and the best measures to combat it. If it serves the purpose only of demonstrating that we are "barking up the wrong tree" it may send us on the right scent and so serve as a basis for a more accurate solution.

The solution of the maternal mortality problem is to be found, according to certain writers, in better trained and educated doctors, more hospital facilities, the elimination of the midwife and the extension of prenatal care. In September, 1920, Dublin made a statement that in New York City and Boston the maternal and neonatal mortality has been reduced more than one-half as a result of intensive prenatal work.

This is a very complex subject, influenced by so many factors that almost any deduction may be possible if only a few of the factors are

Source: Julius Levy, "Maternal Mortality and Mortality in the First Month of Life in Relation to Attendant at Birth," *American Journal of Public Health*, 13 (February 1923), 88–95. Reprinted by permission of the *American Journal of Public Health*.

considered. While this paper analyzes the data particularly in relation to midwifery practice, primipara and multipara, and the nativity of the mothers, we do not wish to give the impression that other factors, like syphilis, dystocia, age, availability of expert service, do not bear a relation to the problem. We believe, however, that with a more general recognition of the data to be presented a number of other factors will be given a less important place in a discussion of the cause as well as the solution of this grave problem.

This study deals particularly with the State of New Jersey, where for the past three years there has been a uniform method of distributing deaths according to residence, and deaths among women of child-bearing age have been closely followed-up and assigned to the puerperal state whenever this was the proper classification. In addition, data is submitted for a five year period for Newark, where every puerperal death has been investigated to determine if a midwife was in attendance at any time. We wish to emphasize this point as it is repeatedly (inadvertantly or deliberately) overlooked in commenting on our studies on this question, namely that every puerperal death, where it appears a midwife was in attendance *at any time*, is charged to a midwife even though the investigation shows that she was in no way responsible for the result or even where it appears that the result was due to unnecessary interference or negligence on the part of the doctor.

MATERNAL MORTALITY NOT ADVERSELY AFFECTED BY PRESENCE OF MIDWIFE

We will consider first the fifteen largest cities in the United States for the year 1921:

Newark, which reports the highest percentage of births attended by midwives, namely 38 per cent, has a rate of 6.5 per 1,000 births or 1 in 154, New York City with 25 per cent of its births attended by midwives has a rate of 5.6 or 1 in 178, Baltimore with 26 per cent, and a large colored population among whom all death rates are higher, has a rate of 5.7, and Cleveland with 25 per cent has a rate of 6.9. Four cities, then, with more than 25 per cent of births attended by midwives, have rates between 5.6 and 6.9.

We would contrast this with the City of Boston, which with its highly organized hospitals, medical colleges, prominent obstetricians, organized official and non-official health work, intensive prenatal work and a well educated general public, presents a maternal mortality rate of 7.7 or 1 in 130 mothers, although only 2.5 per cent of the mothers, according to reports, were attended by midwives. This is the third highest rate among the fifteen largest cities and is excelled only by Cincinnati by 0.2 of a point and New Orleans by 4.2 points.

MATERNAL MORTALITY ON THE INCREASE

For the past five year period the tendency seems to be upward with slight remissions in a few cities in 1921.

In New Jersey the maternal mortality rate in 1921 was 5.9, two-tenths of a point lower than 1920, but in both years it was higher than the previous three years, being 5.4 in 1917. The rate for New York State in 1921 was the same as in 1917, 5.7, and in 1920, 6.9, the second highest in the five year period; the highest was reached in 1918, 8.0. An analysis of most of the states shows a similar situation.

Among the fifteen largest cities, New York City in 1921 reports a rate of 5.6, which is higher than the rate in 1920 and 1917 and but one-tenth of a point lower than in 1919. Boston shows a decrease which has been quite continuous for the five year period, except in 1918, but in 1921 the rate is still 7.7. Philadelphia, St. Louis, Cleveland and Buffalo show an increase over 1920. Chicago, Baltimore, Pittsburgh, Detroit, San Francisco, Cincinnati, Newark and New Orleans show a decrease in 1920, but their rates in 1921 are higher than some cities which report no decrease.

The generally accepted view of the stationary or increasing maternal mortality is expressed by Dublin when he says "the increasing employment of midwives where families under present economic conditions are no longer able to afford hospital or skilled medical care, may have resulted in some of these added deaths."

We would now ask if this increase in maternal mortality is due to an increase in the percentage of cases attended by midwives?

RELATION OF INCREASE IN MATERNAL MORTALITY TO MIDWIFERY PRACTICE

The facts seem to be quite the contrary. There has been a decrease in the number of cases attended by midwives in the State of New Jersey and also in all the large cities, except one. In Newark the percentage has decreased from 48 in 1917 to 38 in 1921, while in the same five year period the maternal mortality has risen from 4.1 to 6.5.

Data is available for nine of the fifteen largest cities. Among seven of these there has been a reduction in 1921 over 1920 in the percentage of cases attended by midwives. In Chicago the percentage remained the same and in Pittsburgh there has been an increase from 16 to 22 per cent. It is interesting to note that this increase in the percentage of cases delivered by midwives was accompanied by a reduction in maternal mortality from 10.0 to 7.6. In Chicago where the percentage of cases has remained stationary there has been a reduction in the maternal mortality from 7.0 to 6.3. Cleveland shows a reduction of the cases attended by

midwives from 28 per cent in 1920 to 25 per cent in 1921 and at the same time shows an increase in maternal mortality from 5.9 to 6.9. These data then give quite the contrary impression.

We have next asked ourselves the question whether the states or counties or cities with the highest percentage of cases attended by midwives show the highest maternal mortality rates?

An analysis of the State of New Jersey by counties in regard to the possible relation of midwives to high maternal mortality presents the following facts:

Of eleven counties with 5 per cent and less of the births attended by the midwives four present maternal mortality rates between 7.6 and 11.8, the highest in the state, while seven counties with approximately 25 per cent of their births attended by midwives present maternal mortality rates between 3.7 and 6.7. The highest maternal mortality rate, 11.8, is in a county where only 2 per cent of the births were delivered by midwives.

An analysis of the cities of New Jersey shows the following:

The lowest maternal mortality rate is in the city with the highest percentage of births delivered by midwives, namely 66 per cent.

The highest maternal mortality rate is in the city with the second lowest percentage of births attended by midwives.

Of six cities with a maternal mortality rate under 6.3, five had more than 50 per cent of their births attended by midwives.

Of the four cities with a maternal mortality rate over 7, one had only one-third and two about one-fourth of the births attended by midwives.

The following analysis of the figures in Newark for the past five years in reference to the relation of midwives to maternal mortality forces the conclusion that there is no basis for believing that the high mortality is the result of their practices; in fact it will be necessary to find an explanation for the lower mortality that appears for women in child-birth and infants under one month attended by midwives.

In 1921 there were 11,705 births in Newark of which approximately 40 per cent were attended by midwives. There were 74 puerperal deaths of which 10 were attended *at any time* by a midwife. That is, midwives attended 40 per cent of the births and only 13 per cent of the mothers that died of conditions assigned to the puerperal state. The rate among midwives' cases was 2.2 while that among cases delivered by doctors in private and hospital practice was 8.7. For the five year period the rate among cases delivered by midwives has varied from 1.0 to 2.2, while that among women delivered by doctors in private and hospital practice has ranged from 6.0 to 8.7.

These puerperal deaths will be analyzed further in order to find a possible explanation for this unexpected low rate among women attended by midwives.

In order to find a possible explanation for the lower rates found for women attended by midwives we have separated the primipara and multipara on the theory that risks to mother and infant are greater among primipara than multipara and that probably a higher percentage of the cases attended by midwives are multipara.

Of the 11,705 births 3,589 were primipara and 7,688 were multipara. The midwives attended 20 per cent of the primipara and 47 per cent of the multipara, the hospitals 51 per cent of the primipara and 22 per cent of the multipara. From this analysis we appear to have obtained a partial explanation of the difference in the mortality rates.

If we were satisfied to argue from general impressions these figures would be accepted as an explanation, but on further analysis it is found that while the midwives attended 20 per cent of the primipara, only one of the 10 puerperal deaths of primipara was attended by a midwife, that is 10 per cent, and while they attended at birth 47 per cent of the multipara, only 8, or 17 per cent, of the deaths among multipara had a midwife in attendance at any time. It would seem then that even among primipara the maternal mortality is lower among women attended by midwives than for those attended by physicians in private or hospital practice.

As a result of more detailed study of these 74 puerperal deaths it has occurred to us that in trying to determine the relationship of attendant to mortality we should first eliminate those puerperal deaths that are associated with miscarriage and abortions, as midwives are not so likely to be in attendance, and in states and cities in which they are forbidden by law to take charge of such cases. We find that 13 of 74 puerperal deaths were associated with miscarriages and abortions. Eliminating then this number we would base the study on 61 puerperal deaths. On this basis it appears that the maternal mortality among primipara delivered by midwives was 1 in 725 births and for multipara 1 in 452 births. We believe that the New York Maternity Center Association reports as a result of their intensive prenatal work and placing as many mothers as possible in hospitals, a rate of 1 in 500. We admit it is difficult to square these facts with our general impressions. Perhaps our impressions are wrong.

NEONATAL MORTALITY (OR DEATHS UNDER ONE MONTH)

We wish to submit at the same time a study of the deaths of infants under one month by attendant as it is probable that both the maternal and neonatal mortality are to a degree affected by the same factors.

The neonatal mortality rate in Newark in 1921 was 40.6 for those attended by private physicians, 34.2 by hospitals and 32.3 by midwives.

For the five year period the record is 38.3 for those attended by physicians, 45.7 for those in hospitals and 26.9 for midwives. A note should be made that in this five year period is included the year 1918 when as the result of the influenza epidemic the mothers who were affected by influenza were sent to hospitals and the new born infants died during the first month from lack of maternal care.

An analysis of the cities in New Jersey in regard to neonatal mortality shows that the lowest neonatal mortality is in the city with more than one-half of the births attended by midwives. Of the four cities with a neonatal mortality rate below the average of the state, three had more than one-half of the births attended by midwives.

Considering New Jersey by counties we find that the counties with less than 6 per cent of their births attended by midwives have a neonatal mortality rate ranging from 32 to 54 per 1,000 live births while those with 23 to 43 per cent of their births attended by midwives have a neonatal mortality rate from 29 to 42.

In Newark during the past 3 years there has been a decrease in the percentage of cases attended by midwives from 45 to 38, while there has been an increase in the neonatal mortality rate from 31.6 in 1919 to 37.0 in 1921. The neonatal mortality in Newark in 1921 from babies delivered by midwives was 32.3, those in hospitals 34.2, physicians of private practice 40.6. We have also taken a five year average which gives the lowest rate for midwives, 26.9 and highest for hospitals, 48.7.

In the fifteen largest cities in the United States the neonatal mortality was highest in Buffalo, namely, 49 per 1,000 live births and lowest in San Francisco with a rate of 23. New York City, Philadelphia, Baltimore and Newark have rates between 32 and 37, while the other five cities have rates of 40 and above; no data were obtainable from four cities.

Newark with the highest proportion of cases delivered by midwives, 38 per cent, has the fourth lowest neonatal mortality, although we recognize that syphilis is probably a larger factor than it is in the death of mothers or the deaths under one month.

The average still-birth rate for the state is 41.4. This is about the average throughout the country and has been for many years. The lowest still-birth rate is in the city where two-thirds of the births are attended by midwives and is 29.4, 25 per cent lower than the average for the state. Of the five cities with still-birth rates of 40 or below four had more than one-half of the births attended by midwives.

NATIVITY OF MOTHER AND MORTALITY RATES

Perhaps the explanation for these lower maternal and neonatal rates for midwives' cases is to be found in the fact that midwives attend women of foreign birth, and doctors, particularly in the hospitals, women

of native birth. At any rate an analysis of death rates by nativity of the mother shows a marked difference in their mortality rates.

This fact is to be emphasized and taken into consideration in reporting results of special measures for the solution of this problem, as intensive prenatal work, as it is obvious if the piece of work is done among a group that normally presents a lower rate than the city as a whole the mistake will be made of crediting to the special effort or special measure what is normally the lower rate of a special group. We believe that an analysis of the figures published by those interested in prenatal work will show that a good part of their reported good results as evidenced by a reduction in mortality rates is due to the normally lower rates in the specially selected groups or districts.

The neonatal mortality rate among infants of Italian mothers in Newark was 29.3, and that for all infants attended by midwives 32.3. The neonatal mortality rate of Russian mothers 27.5, Austrian 19.2, while that for infants of native born mothers was 41.1. Midwives attended 83 per cent of the Italian mothers, 53 per cent of the Austrians and only 16 per cent of the native born.

MIDWIVES SUPERVISED IN NEW JERSEY

In connection with submitting this data it might be desirable to state that midwives in New Jersey have been licensed since 1892 and that in 1915 the law required a two year course of instruction. Since 1918 midwives have been actively supervised by the State Department of Health for purposes of instruction.

SUMMARY

A careful analysis of still-births, puerperal deaths and deaths under one month indicates:

1. That the mortality rates are not unfavorably influenced by the percentage of births attended by midwives.
2. That the lowest rates are frequently found in cities and counties with the highest percentage of births attended by midwives.
3. That even among primipara the puerperal death rate is lower among women attended by midwives.
4. That the puerperal death rates by nativity of mother are lowest among those groups that have the highest percentage of births attended by midwives.

CONCLUSION

In looking about for the solution of the maternal mortality problem the thought has come to us that we will have to go further than to

arrange for adequate training for doctors in colleges and hospitals. Will we not have to recognize the possibility that the young physician, when working alone in difficult surroundings, under the pressure of a busy but poorly compensated practice, may neglect his technique and develop methods and practices that are time saving, but frequently death dealing?

Dr. Holmes of Chicago frankly admits that the maternal mortality in private and hospital practice has not shown any reduction in spite of advances in knowledge and technique and gives "meddling obstetrics" of the busy practitioner as the probable reason.

Is a method similar to the one that has yielded such encouraging results with midwives to be applied to all puerperal deaths?

If these facts indicate that some such action should be undertaken, the next question is how shall it be done? Through the County Medical Societies? Through a corps of consultants? Through the Health Departments?

We think a proper decision on this question will help considerably in a solution of the problem connected with the great and unnecessary loss of mothers and new born babies.

16. *The Progressive Midwife*

MIDWIFERY COURSE IN JERSEY CITY HOSPITAL

The course for graduate midwives being given under the direction of Dr. George O. O'Hanlon, Director of Jersey City Hospital, Jersey City, in cooperation with the State Department of Health is progressing with great satisfaction to all concerned.

In the beginning arrangements were made for twelve hour duty, seven to seven. It was found that this was difficult for the midwives who came long distances. The older midwives complained that these hours would be too strenuous for them.

When this was brought to the attention of Dr. O'Hanlon and Miss Jessie Murdock they very kindly arranged for the midwives to serve daily from 8 A.M. to 5 P.M. for one month or for one-half day either morning or afternoon for two months.

These adjustments should encourage a much larger group of midwives to take the course and we hope that they will do so.

Requirements and Hours of Duty

The Course is open to all licensed, registered and supervised midwives in the State. It is free of tuition. Lost time may be made up at the end of the course.

One Month—Daily (with every other Sunday off), 8 A.M. to 5 P.M. *or* 8 P.M. to 7 A.M.

Two Months—Daily for a half day, 8 A.M. to 1 P.M. *or* 1 P.M. to 5 P.M.

Does Not Interfere with Cases Already Engaged

For midwives who are busy and desire to take the course, it is possible to be called from the hospital to attend cases for which they have been previously engaged. We would advise however that they get in touch with sister midwives in their communities to do the post-partum care. This will be a good way for midwives who are unable to take the course and for good reasons have been excused, to help others to do so. In

Source: *The Progressive Midwife: Quarterly Bulletin*, New Jersey State Department of Health, Bureau of Child Hygiene, November, 1927. Reprinted by permission of the New Jersey Department of Health.

other words show some of that good sportsmanship to each other which you so often show in handling your patients.

Some of the Benefits Derived

The midwives are given a splendid opportunity to review their past training. In addition to this those who have completed the course state that they have learned many new and up-to-date methods in the regular care of mothers and babies.

One midwife who had trained in Poland many years ago was very anxious to take advantage of the course. Although she has been suffering from rheumatism for the past year she has started the course for the morning session. She speaks little English but seems fascinated with the new teachings. Another midwife who speaks English well has taken the responsibility to further explain the teachings to this older midwife.

In the training are included the following: Temperature taking; urinalysis; blood pressure reading; manual expression of breast milk; the proper and scientific care of mothers during labor and delivery; histories; enemata; rectal examinations; watching for abnormalities; normal and abnormal deliveries; routine after-care and diet of mothers; proper and latest methods of infant care; management of clinic cases; lectures. The personal supervision and instruction from the best of physicians are offered the midwives during the course.

What the Midwives are Saying

Following are some glimpses of what some of these who have completed the course think of it.

Mrs. M. James, Newark—I consider this course one of the greatest opportunities offered us through the supervision of the State Department of Health. It meant that I had to get up before 5 A.M. each day but it was worth the sacrifice.

Mrs. A. Larsen, North Bergen—It was a splendid course and brought back many things I learned in Norway many years ago. The new ideas interested me very much.

Mrs. M. Spiecker, South Amboy—The Course meant a lot to me and the experience was wonderful even though I had to leave my home at South Amboy for one month and board in Jersey City. Night duty was hard and I lost 50 pounds but the experience was well worth it. It helped me in several ways.

Miss M. Paraboschi and Miss E. Sagess, Newark—The course was most interesting and we learned a lot.

Mrs. M. Wehman, North Arlington—I want all the midwives to know that they are missing a lot if they do not take advantage of this Course.

The doctors and nurses are most kind to us and although there is plenty of work it is a vacation to me to be able to devote my whole time with mothers and babies.

Mrs. H. Barthoeld, Vincentown, Burlington County, secured a room in Jersey City and started with the October 15th class. She has come 75 miles to take the course.

The ever-to-be-depended-upon Bayonne group of midwives was a little slow in starting the course but decided at their last meeting to do so. The result was that in addition to those from other districts five reported at one time and the hospital sent out an S.O.S. Too many midwives in training at one time!

Shall it Continue?

The next two classes start on November 15th and December lst. Write in immediately if you can enter on one of these dates.

Don't delay any longer! Join the ranks of New Jersey midwives who are in earnest not only in raising their own standards but in raising the standards of all New Jersey midwives.

MATERNAL NURSING—(DR. JULIUS LEVY)

Mother's Milk for Babies—Cow's Milk for Calves

There is a specific relation between the curd of milks of different species and the intestinal tracts of their young. Milk with a large tough curd is found in animals with large tough stomachs and small intestinal tracts. Milk with fine flocculent curds is found in animals with small delicate stomachs and large intestinal tracts. The calf is being prepared to digest grass, the baby to digest well cooked soft food. The cow secretes a milk that forms a tough curd, the woman a milk that forms a fine flocculent curd.

There is no True Substitute

We should pause before attempting to substitute Cow's milk for Mother's milk—before making it "just like human" as our experts on cows claim they can. When we analyze the curd of Cow's milk and Mother's milk we find interesting differences that are rarely mentioned in substitute feeding.

Mother's milk contains lecthin and combined phosphorus, substances important to an animal whose nervous system undergoes its full growth in the first two years of life, but of no value to an animal like the calf, lamb or kid, whose brain is as fully grown on the day of birth as it will

ever be, animals who within a few hours or days after birth can jump about and do almost all the things the parent can do, but who never show any further mental development. Again, we have here a specific relation between the mother's milk and the needs of the infant organism.

There also is a relation between the kind of curd in the milk and the length of time the animal will remain on milk. The human infant has a stomach adjusted to a fine flocculent curd and is being prepared to digest fine well cooked food; it has no need for hard, leathery curds as found in cow's milk.

Mother's Milk Changes to Suit Baby's Needs

Milk in the breast does not remain unchanged as does the milk formula in a bottle. It changes not only several times a day and during each nursing, but is influenced and determined by the frequency of nursing, length of nursing and vigor of nursing, that is, it adjusts itself to the kind of baby and the condition of the baby at the breast.

How valuable this is when the baby is not feeling well, or needs less energy food, as in summer, all who treat babies know.

Summary

These are the real reasons why a baby should not be bottle fed, even though you think you can keep it alive on the bottle and have it look well nourished. But the fact that twenty-seven times as many bottle fed babies have diarrhea than breast fed; ten times as many die; and that in a thorough study of a small city in Germany of bottle fed babies a very small percentage was found alive at 21 years, can leave no doubt of the value of breast feeding.

THE CARE OF BABIES' EYES

Our last checkup showed that 98% of the midwives of New Jersey use Silver Nitrate 1% in the eyes of a new-born baby. However it has come to our attention that some midwives are not careful or accurate in the way they administer the drops.

Be sure that you insert two drops of the solution in each eye. That does not mean just expressing two drops with the result that may land on the cheeks of the baby. Draw down the lower lid of the eye very gently and be sure that two drops, no more or no less get into each eye.

No midwife would want to feel that she was responsible for a baby being blind. Blindness is in a large measure preventable, and there is no such thing as cold in the eyes. Once more we want to urge upon all midwives the following instructions. In any case of sore eyes:

1. See that a physician is called.
2. Take a smear.
3. Report the Case to the Board of Health.

A case of Sore Eyes in a new-born baby is as reportable to the Board of Health as a case of Scarlet Fever.

It is due to the carrying out of these instructions that New Jersey Midwives have helped to reduce Blindness in their State.

We learn from Dr. B. F. Royer, Medical Director, National Committee for the Prevention of Blindness that several different kinds of germs have been found to cause serious eye infections. The most important is the Gonococcus. The Staphylococcus, which is the cause of boils and carbuncles, the Streptococcus which is the cause of erysipilis and infection of the mother and the Pneumococcus may all be transmitted to the baby's eye and cause a serious eye infection.

About six out of ten of birth infections are due to the Gonococcus, and four out of ten to the other miscellaneous germs enumerated; yet proper precaution taken at birth almost certainly cleanses and sterilizes the eye and gives assurance against infection. It is for these reasons that we say preventive measures such as the use of Silver Nitrate 1% "should always be taken."

The Result of Protection at Birth

The general use of Prophylactic Measures to prevent ophthalmia neonatorum, begun by physicians in this country about 16 years ago, has brought about a great reduction in the number of children blind from that disease. Twenty-five years ago one out of every three children admitted to schools for the blind in the United States was blind as the result of infection at birth. By last year the number had been reduced to about one out of every 10. New Jersey is one of the states where this disease is reportable, and the State Department of Health furnished free of charge to all midwives a supply of the solution used to prevent the disease.

HOW MIDWIVES CAN HELP EACH OTHER

Many difficulties which occur in the everyday work of midwives are the result of a lack of understanding. We shall endeavor to give the midwives some important points on everyday ethics. Ethics is the science of moral duty.

Duties

1. It is your duty to accept as right and necessary many things that you cannot understand at the time. More experience in your profession will show you the value of this.
2. A second duty is to respect authority. Remember they are working for your good.
3. A third duty is to be unselfish in your everyday work.
4. A fourth duty is to be sure that you understand instructions given you and do your best to follow them.

Service

Service to mothers and babies is the object of midwifery. If a midwife does not possess the spirit of helpful service she has made a mistake and should never have become a midwife.

Your patient is most important.

She is the reason for your profession.

Her welfare and comfort should always be first in your mind.

A midwife who feels her responsibility can be trusted and depended upon.

Loyalty

Loyalty to the patient's welfare means that she is respected and that her private affairs shall not be discussed with others.

Loyalty to the physician is demanded of every midwife not only because he is her superior officer but also because it is most important that the patient have confidence in the physician.

Loyalty to each other does not mean that you close your eyes to shortcomings. It does mean that you will not find fault or criticize each other except to the one who is in a position to remedy it.

If a person finds fault with a midwife a loyal sister midwife will defend her as she herself would want to be defended. This will defend the interests of midwifery.

Midwifery will be made better or worse by the way midwives do their work, by their daily conduct on and off cases, by what they say and by their general moral and spiritual influence.

What you are counts for more than what you do. Someone has said that one of the hardest lessons is to learn to spell 'Self' with a little 'S.'

Success and advancement in her work usually comes to the one who continually studies how to give her patients a little more, a little better service.

QUESTIONS AND ANSWERS

Prenatal Care—Personal Hygiene

Q. What should a midwife teach her patient concerning personal hygiene during pregnancy?

A. If a mother had had a baby she will know the value of cleanliness, bathing, fresh air, rest, sunlight, proper and nutritious food and the proper care of the skin and bowels. This will all apply to the mother in caring for herself. In advising a patient with her first baby it is necessary to take plenty of time in explaining all these details.

Diet

Q. What should a midwife teach her patient concerning diet during pregnancy?

A. First of all she should teach the mother the importance of regular meals. The diet should be balanced with all the essentials for proper nutrition. Proteins consist of meats, eggs, peas, beans and milk. Carbohydrates are represented by cereals and potatoes. Fats are represented by cream and butter. Vitamins in the general diet include milk and leafy vegetables. Another essential is salt.

Teach her how to cook properly. She should drink at least 1 quart of water and 1 quart of milk each day. Then she should eat plenty of leafy vegetables and fruit. If the patient eats cereal, eggs and fish it is wise to eat meat only once a day.

Cod Liver Oil

Q. *Is Cod Liver Oil good for a pregnant mother?*

A. At about the fifth month of pregnancy it is a good thing for pregnant women to take about one tablespoonful of Cod Liver Oil daily. They should treat it as a food. Cod Liver Oil is the same as butter.

Tub Baths

Q. *Should a pregnant woman get into the bath tub during the last month of pregnancy?*

A. No. Principally because of the great danger of slipping.

Q. *Would a tub bath at this time have any effect on the baby?*

A. No. Only it is difficult for the mother to get into a tub in that condition.

ANNUAL REGISTRATION

Remember your annual registration with the State Board of Medical Examiners! It is due this month! If you do not get a notice, send for one!

COMMENDATIONS

We wish first of all to express our thanks and appreciation to Dr. George O. O'Hanlon and Miss Jessie Murdock, R.N., of Jersey City Hospital for making it possible for New Jersey midwives to take a special midwifery course in Jersey City Hospital.

We wish also to commend all midwives who have taken this course which is being given in cooperation with the Bureau of Child Hygiene, State Department of Health.

NOTES

The oldest midwife in New York State at the age of 82 with a total number of 1,682 patients to her record applied for renewal of license. Her record was that in 40 years practice she had not lost a patient. This was a good record and her license was renewed.

In France recently there was a contest for championship among midwives. One village claimed that their midwife had delivered 1,000 children. Another village claimed the honor for their midwife who had a record of 4,000 births delivered by her. Another with 5,411 made claim, but it finally went to a midwife of another village who had delivered 6,582 cases in 60 years.

VI

The Nurse-Midwife: A Possible Solution?

In the midst of the early twentieth-century midwife debate, a few physicians and public health officials suggested that the most fitting solution to the "midwife problem" would be the replacement of midwives with nurse-midwives. While neither the medical community nor the public initially took much notice of this suggestion, the evolution of nurse-midwifery over the next half century ultimately had a profound impact on the quality of health care available to childbearing women. The two selections included in this chapter illustrate some very early efforts to promote nurse-midwifery in the United States.

As early as 1911, Carolyn Conant Van Blarcom had encouraged American nurses to seek out special training in midwifery. However, it was the St. Louis, Missouri, physician, Fred J. Taussig, who actually popularized the term nurse-midwife. His article, "The Nurse Midwife," which was published in the *Public Health Nurse Quarterly* in 1914 is reprinted in this chapter.

Taussig believed that it was "better to train the nurse to do midwifery than to attempt to teach the midwife some of the rudiments of nursing." Arguing that the majority of general practitioners disliked obstetrics, he anticipated that most physicians would come to view the nurse-midwife as a liberator from the "irksome work" associated with pregnancy and parturition rather than as an economic or professional threat. While he recognized that it would probably be many years before the nurse-midwife would successfully replace the midwife, he was confident that nurse-midwifery represented the most economical and efficient solution to the "midwife problem."

The first concrete effort to establish a nurse-midwifery service in the

United States occurred in 1925 when Mary Breckinridge, a Kentucky nurse who received midwifery training in England, founded the Kentucky Committee for Mothers and Babies (the predecessor to the Frontier Nursing Service). "The Nurse-Midwife—A Pioneer," written by Breckinridge and published in the *American Journal of Public Health* in 1927, describes the initial efforts of that organization to provide nurse-midwifery services to the impoverished families living in the rugged and mountainous terrain of eastern Kentucky.

Mary Breckinridge and her "nurses on horseback" made important strides in reducing the infant and maternal mortality rates of eastern Kentucky. Following on the heels of Breckinridge's successful experiment, a second nurse-midwifery service, the Maternity Center Association, was founded in New York City in the early 1930s. Despite the impeccable records of both the Frontier Nursing Service and the Maternity Center Association, nurse-midwifery failed to make significant headway over the next several decades. Although the establishment of nurse-midwifery services has almost always resulted in significant improvements in the health of pregnant women and infants, it has only been within the last decade that nurse-midwives have begun to receive widespread acceptance and recognition within the United States.

17. *The Nurse Midwife*

Fred J. Taussig

While I have been asked to present the midwife question from the point of view of the doctor, I feel that it would be wrong to do this literally. The midwife question must be solved independently of the interests of any special class. Whether a certain number of incompetent women doing midwifery are deprived of their employment, or whether a few general practitioners lose a portion of their clientele, is a matter of very little consequence as against the possibility of saving the lives and health of our mothers and babies.

As an important step in the solution of this problem, I would suggest for your consideration the establishment of schools of midwifery, admission to which would be limited to graduate nurses. The idea of utilizing the graduate nurse, especially the visiting nurse, for midwifery is not a new one. In England a considerable number of nurses have already taken up this work. Dr. Henry Schwarz only recently suggested the importance of training nurses to do midwifery in rural communities. As far as I know, however, the suggestion of a special school for nurse-midwives has not been seriously considered. Whether such a school should maintain an independent existence or be organized as the graduate department of a nurses' training school is a matter for later consideration.

My idea of the curriculum of such a school would include the following: Attendance for six months to a year, entire charge of at least thirty cases of normal confinement, a majority of which should be out clinic cases, a systematic course of lectures and demonstrations, thorough hospital training in diagnosis, special work in the treatment of emergencies, etc. Affiliation with a hospital possessing a large obstetrical material and with a medical school having trained instructors in this branch would of course greatly increase the efficiency and standing of such a school. In view of the large number of foreigners desiring the services of women at their confinement, it would be the object of such a school to encourage as many foreign-born graduate nurses to take up this work as possible.

Such in brief is the outline of my suggestion for a nurse-midwife school. A number of objections to such a proposal will at once come to

Source: Fred J. Taussig, "The Nurse Midwife," *Public Health Nurse Quarterly*, 6 (October 1914), 33–39.

your mind. In the first place, could we not accomplish the same end by establishing proper regulation and education of the midwife? I realize, of course, that the introduction of the nurse into midwifery, if it succeeds, is bound to be a gradual process and that in the meantime every effort should be made to improve the condition of the ordinary midwife; but I am also convinced of the impossibility of establishing such state regulation, supervision and education as exists in some of the countries of Europe. It requires a strongly centralized government with strict police supervision to put into successful execution such a system. We have not and do not want such paternalism in our government. Regulation and education in this country must therefore always be unsatisfactory.

But even in countries like Denmark and Italy where state control and educational requirements for midwives are at their best, the type of woman entering this work is inferior to that of the English and American nurse. In Bellevue Hospital, New York, the midwives, I understand, have been given special training in nursing, and while it is doubtless the best we can do for the time being, isn't it putting the emphasis at the wrong point? The foundation for the proper care of the woman in confinement lies in the work of the nurse. It is better to train the nurse to do midwifery than to attempt to teach the midwife some of the rudiments of nursing.

Next we come to the argument that the midwife should rather be eliminated through the general practitioner, that the creation of the nurse-midwife would be simply substituting another sort of half-trained person in place of the fully trained physician. If we could turn out a sufficient number of physicians specially trained in obstetrics to care for all confinements, I would agree that the nurse-midwife was superfluous. But such a condition is not apt to arise for many generations. At present there are barely a score of such men in any of our larger cities. The problem actually before us is whether the nurse-midwife would not be better fitted for normal obstetrics than the majority of general practitioners.

I fully realize that the general practitioner is the backbone of the medical profession and that we cannot do without him. He performs his manifold duties with a skill and diligence that we all admire. Some of these duties have already been taken from his shoulders, but with the increasing complexity of medical practice, there should be additional relief in order that his time and energy may be spared for other work. I think it can be truly said that the majority of general practitioners dislike obstetrics, are impatient at the necessary delays, lack daily training in aseptic methods, and above all, must take care of all manner of infectious diseases. I grant that the physician has a general medical training superior to that of the nurse-midwife; but is he for that reason alone better qualified to attend normal confinements? Is not his imperfect asepsis and the risk of carrying contagion to his patients a serious danger

in his obstetrical work and are not the delays of his obstetrical work oft time a hindrance to his other duties as a practitioner? Should he not therefore rather look forward with relief to the time when the properly trained nurse can undertake this irksome work for him?

Nothing is more essential in obstetrics than rigid asepsis, and here again the nurse has special advantages. Comparatively few practitioners have hospital training, and where they do, this is usually limited to one year of a rather general experience. The nurse, on the other hand, has two to three years of daily hospital routine, during which not merely the theory but the practice of aseptic methods are drilled into her until they become second nature. Take such a woman and give her six to twelve months' special training in obstetrics, have her continue this work in further years of practice and it stands to reason her aseptic technique must be superior to that of the general practitioner.

But how would it be in case of some complication? Who would then best serve the interests of the patient? It is unfortunately true that in such instances the practitioner will, as a rule, try to get along by himself and often attempt operations which he is not qualified to perform. The nurse-midwife, on the other hand, while trained to give emergency treatment, could be trusted to send for help in any serious case and would naturally send at once for the man specially trained in obstetrics.

If I have in the foregoing seemed to emphasize the advantages of the nurse-midwife over the general practitioner, it should not be inferred that my motive is primarily the elimination of the general practitioner from normal obstetrics. The main issue is the gradual substitution for the midwife of some better qualified person, and this better qualified person is, as I have shown, rather to be found in the nurse-midwife than in the general practitioner.

And now let us consider for a moment the objections that might be raised by the nurses. First of all there is the name, the fear that the public may identify such nurses with the objectionable type of woman engaged in midwifery here in America. I trust the nurses have in their own past experience sufficient illustration of the fact that the public soon learns to differentiate the work from any stigma attached to the name. After all it is not so long ago that we obstetricians were termed man-midwives, and in England, even to this day, obstetrics is termed midwifery. The famous Sir James Simpson, discoverer of chloroform anesthesia, was Professor of Midwifery. Among the surgeons also a similar prejudice had to be lived down, for they were formerly termed barber-surgeons. Perhaps the best illustration how quickly the public differentiates good and bad work independently of the name is to be seen in England, where even before the midwives act of 1902 the midwife who held a diploma from the London Obstetric Society occupied a much higher position socially and professionally than the ordinary midwife.

It is the quality of service rendered that counts in the respect of the community.

As to the character of the work and its remuneration I cannot see why there should be serious objection on the part of nurses. The increased responsibilities ought rather to appeal to the ambition of those nurses who are fond of obstetrical work. As to remuneration, I believe that in the beginning a certain number of the nurse-midwives should be in the employ of visiting nurses' associations until their reputation is sufficiently established. Eventually the successful nurse-midwife should be able to earn far more than the graduate nurse.

It might also be claimed by some that if the nurse was permitted to care for confinement cases, she would soon want more, would take care of abnormal cases, do gynecology, and assume functions, just as many midwives do now, that would make her a danger to the community. I do not fear such a complication. The nurse through her higher moral sense and better medical education will realize her limitations. Moreover, through the regulation of nurses' associations and schools, any overstepping of bounds could be met with official disapproval, so that such a nurse would promptly lose standing in her profession. An occasional transgressor will doubtless be found here just as among the doctors, but this is no argument against the system as a whole.

A further argument in favor of the proposed system lies in the increased economy of work it secures. Nowadays there is so much more work to be done for the health and social betterment of the masses than there are people to do it, that wherever we can get one person to perform the work formerly done by two it should be so arranged. In the past it has been found advantageous for the visiting nurse thus to assume some of the functions of the social worker. Under the system of the nurse-midwife, she would also undertake some of the work of the physician. In the vast majority of cases the latter could be spared the necessity of attending confinements.

Finally, while realizing the important work of the obstetrical outclinic in caring for women during confinement, and in training physicians for these duties, and while hoping that these outclinics may grow larger at the expense of the midwife, I do not believe they answer every purpose. For one thing, they tend to pauperize a large portion of the working classes. The reason so many persons prefer the midwife in spite of her lack of asepsis, beside the fact that she is a woman, is that the midwife is paid a fee for her services, and that the patient can stay at home and maintain her self-respect and her privacy. With the nurse-midwife in charge, all these advantages could be preserved and in addition thereto the patient could receive the best care for herself and child during and after the confinement. I agree entirely with the wisdom of Dr. Ehrenfest's suggestion that the public should be educated about the special advan-

tages of the obstetrical outclinic through the agency of the visiting nurse, but even so there will still be a large group of patients who do not want this sort of service and whom the nurse-midwife can best handle. The latter would work in co-operation with and not in competition with the outclinic. It cannot therefore be argued that a school of nurse-midwifery would reduce the obstetric material for the medical schools. On the contrary, the obstetric clinics would be the gainers, since most of the complicated cases would naturally be referred to them for treatment. While able to pay a moderate fee to the nurse-midwife, patients of this class could not, as a rule, afford to pay for a consultant and help would naturally be sought from the best qualified obstetric charity, the university clinic.

In conclusion, if I have been over-enthusiastic on the subject of schools of nurse-midwifery, it is with a realization that changes of this sort are not made in a day, but are the result of gradual evolution. It will take many schools many years to supplant all the midwives, but eventually it will come to pass. The nurse-midwife will, I believe, prove to be the most sympathetic, the most economical, and the most efficient agent in the care of normal confinements.

18. *The Nurse-Midwife: A Pioneer*

Mary Breckinridge

The midwife is not a pioneer, but the nurse as a midwife. The midwife's calling is so ancient that the medical and nursing professions, in even their earliest traditions, are parvenus beside it. Before the pastoral age, in the springtime of the race, there was need for the midwife. As a calling it is more than primaeval; it is primordial. In the continental countries of the Old World where the calling has kept abreast of modern developments, the position of the midwife is dignified and assured, and something of her long descent is kept still in the names by which she is known—"wise woman" and "earth mother."

A NAME IN DISREPUTE

I am not one to quarrel with the good English name of "midwife," fastened on us by centuries of venerable usage. We have allowed the calling to become degraded through ignorance and superstition, and the name suffers unjustly, much as did nursing in the Gamp days before Florence Nightingale. In the late 19th century in England, when midwifery had sunk to as low an ebb as it is with us to-day, a group of English gentlewomen founded the Midwives' Institute, and started the ball rolling that was to eventuate in a national status under the Central Midwives Board of England, Scotland and Ireland. The word "midwife" there, too, was in such disrepute that Miss Louisa Hubbard once said to Miss Rosalind Paget: "My dear, I wish there was another word for you, it would be so awkward if we used it just when the footman came in to put on the coals."

In the Kentucky Committee we have accepted the term "midwife" and grafted it on that of "nurse." To the people we are serving it is the term in use, and any other, such as "obstetrical nurse," would only confuse them.

THE RURAL MOTHER

In this discussion my point of departure is not going to be the medical profession, greatly as I honor it, or the nursing profession of which I

Source: Mary Breckinridge, "The Nurse-Midwife: A Pioneer," *American Journal of Public Health*, 17 (November 1927), 1147–1151. Reprinted by permission of the *American Journal of Public Health*.

am a member. My point of departure is the rural mother, because once I was a rural mother and I understand her position—that is why I became a midwife, feeling that the midwife only could reach the rural mother's deepest need.

PLACENTA PRAEVIA CASES

This position is not academic or theoretic with those of us who live in the heart of the country districts. In July, one of our prenatals, a woman with six little sons, living on Bad Creek, 32 miles of muleback travel from the railroad, began bleeding slightly. This was reported by the nurse-midwife living in that district to the supervisor and to me. Meanwhile she sent a man on horseback over to Bell County for the nearest doctor. He was away on vacation. I might add that the only Leslie County doctor (a very fine one, but only one for 10,000 people in 373 square miles) was also away on holiday. The doctor nearest in Harlan County (another day's ride away) could not come; so we tried a fourth county, Perry, on the opposite end of Leslie from Bad Creek, and one of the Hazard doctors put aside his practice to answer our call. He rode 7 hours on horseback to reach Wendover, our nearest center. There we gave him a fresh horse, some sandwiches and a guide, and he rode through the night 3 hours longer and reached the patient (a placenta praevia) and saved her life.

Ten days later another prenatal in quite another district, on Bull Creek, began bleeding. The nearest doctor this time was the one in Hazard, 24 miles away, on horseback. When we sent him word we thought we had another placenta praevia, and he said: "Good Lord, you are having an epidemic of them," and began riding in our direction. But this mother did not hold out so well as the other. The loss of blood was terrific. She went to pieces, so the nurse-midwife had a neighbor give chloroform, and she went in and got the baby. The mother lived. The doctor wrote me later: "If that nurse had not had the courage to plunge in and take hold, there would have been a dead patient before I got there."

OBSTETRICAL GENIUS REACHES BUT A FRACTION OF MOTHERS

These true stories illustrate why those of us who live in country districts feel as we do. Our point of departure cannot be other than the rural mother herself. And of what avail is it to her that we pile Pelion on Ossa—erect costly buildings in the cities, and perfect the obstetrical genius of a few great men—to reach with super-perfect care a fraction only of our motherhood? These buildings and these men are not used in the training of the only people who can reach the rural mother. That

is why our maternal mortality rate is the highest of all according to the Children's Bureau, January 1, 1927. That is why in our history as a nation we have lost more women in childbirth than men in battle. That is why two hundred thousand of our weakest and most defenseless citizens pass annually from one dark cradle to another with hardly a gap between.

It is not the big things we are doing, but how many mothers we are saving, that matter. It is as though in war we expected ten thousand wounded, and arranged our resources so as to give perfect care to three thousand and no care at all to seven thousand, leaving them on the battlefield just as they fell, to die or to creep home mutilated and unbefriended.

THE YOUNG WOMAN'S BATTLE

Maternity is the young woman's battlefield. It is more dangerous, more painful, more mutilating than war, and as inexorable as all the laws of God. There is no escaping it. But for her there will be no drums beating or trumpets blaring. Off on the lonely farmstead where the true heart of America is beating—for always in its peasant population lies a nation's true heart—the young mother is facing her agony and danger that the hope of America may come into life. It is not what we are doing in cities that counts for her, but the service actually available way off there.

Every day and night at our four centers of the Kentucky Committee in the two hundred square miles, which is all the country our service covers as yet, we have expectant mothers registered. Any hour may come the call: "Hey, woman, my woman is needing you," and the nurse-midwife of the Kentucky Committee gets her lantern and rides off to the little home on the creek bed, where life is struggling to enter and threatening its toll of life. By the bedside of the mother who needs us—that is where our work must be done. Only there will the death rate be cut down. Who is taking care of Alabam Sizemore on Hurrican Creek to-night when her baby is born? On that answer, and only on that answer, hang the vital statistics of America at their most vulnerable point.

STATE SUPERVISION OF OBSTETRICS

What have those fifteen other nations with lower maternal death rates than ours in common that we lack? No better medical or nursing services, if as good, in the great centers of civilization! But they have each and all one thing which we are missing altogether, and that is skilled midwifery, trained in the obstetrical centers and supervised by the state, for each peasant mother in Highlands and Alps, Tyrol and Apennines.

May not the conjunction be more than haphazard? Those of us who have supported the venture of the Kentucky Committee stake our all on that throw.

COMBINING NURSING AND MIDWIFERY

A word as to our methods. We think the Anglo-Saxon plan of combining nursing and midwifery in country districts fits better into our American tradition than the continental system of specialization. It is economically more feasible in rural work. The famous Queen's Nurses of Great Britain, under the generalized system, have year after year a maternal death rate half that of the national, and one-fourth that of ours in the United States. Their midwifery service cares for some forty to fifty thousand women annually in England alone.

HEBRIDES PLAN A GUIDE

We have arrived at our plan of organization in Eastern Kentucky after a study in the Hebrides of the plan followed by the Scotch Highlands and Islands Crown Commission, of which Sir Leslie McKenzie is chief.

Each of our nurse-midwives lives at a center in the heart of her district of not more than a radius of 5 miles, which is about 78 square miles. Each such district has its own local district committee, with chairman and secretary, which meets monthly at the center to get the nurse's report and advise with her. In every county, however isolated, there are to be found leading citizens capable of directing affairs. Those of Leslie County are on our local committees, and words fail to express our gratitude to them for a cooperation which has made our work possible.

CHARGES

In fees we again follow the Scotch Highland system of making a yearly charge of $1.00 which covers all services but midwifery. Where this has not been paid, 25 cents is charged for a nursing visit. Five dollars is our midwifery fee and we will take produce in payment, such as hay and fodder for our horses, or the husband's labor. For this fee we give prenatal care (the earliest possible), delivery service, and full postpartum nursing for 10 days. In the case of the two placenta praevia cases, we specialed both patients day and night from the time bleeding began until delivery. Otherwise both patients would have died.

The midwife never leaves her patient once she is in labor, staying 2 days and nights in the home if need be. We think the support and help given through the long hours of the first stage has a bearing on the outcome. Because we have been trained in midwifery, we are able to

see the normal cases through and also to recognize the abnormal and get medical aid at any cost, from any distance, when it must be had, carrying on with courage until it comes.

MANY GIVE THEIR SERVICES

In our general policies and finances we are guided by a state committee, which is a sort of a Who's Who in Kentucky, of leaders in professional and social and educational life. The metropolitan physicians and surgeons in our group, and many others beside these, have given their services for special cases of all kinds which we have carried down to them out of the mountains. Several doctors have come up to us and held clinics, again giving their services. The Louisville and Nashville Railroad, most public spirited of corporations, issues passes for all indigent cases and their nurses. From the State Board of Health, whose chief, Arthur T. McCormack, M.D., has been our big friend from the beginning, we receive our licenses to practice midwifery and more kindness and help than we can ever repay.

TRAINING FOR NURSES

Our nurses are all required to pass the English, Scotch or Irish Central Midwives Board examination in midwifery, with its prerequisite in training, to qualify on our staff. Several American nurses have done this and we have also English nurses. This gets our demonstration under way. Similar training must, however, be provided in this country to nurses as midwives, or to midwives as such, before the need of Alabam Sizemore is met on every Hurrican Creek.

Our nurses are either trained or experienced in public health before coming to us.

At the request of the State Board of Health we give typhoid vaccine and toxin-antitoxin. Such has been the response that typhoid and diphtheria (that most terrible scourge of isolated children) have been almost wiped out of the districts we cover. We have given thousands of inoculations in the two years of our existence. In one district alone we gave over five hundred in a month. One nurse has given as many as 140 in a single morning.

BEDSIDE NURSING THE ENTREE

We believe the reason our preventive work has been so successfully received is because we also give bedside nursing care, with emphasis of course on its teaching values. To illustrate, nearly a year ago we opened up a new area where no modern work had ever been done

before, not even from a mission station. We formed our district committee of leading citizens and planted two nurse-midwives there with horses and saddle bags, and began.

Only two or three people came to the first health clinics. Then there came an epidemic of influenza with some pneumonia. We nursed the sick—only that—but it was good nursing and they all got well, even the desperately ill pneumonias. Then they began coming to the clinics, seventy and eighty strong.

All the arms in that area are shot up with vaccines; and we have separate baby beds, and screened houses, and our chairman making public addresses for sanitary toilets and advising hookworm treatment, and many other activities. We believe in bedside nursing. We think it humane, and then, too, in public health it is an open sesame.

All summer the babies in Leslie County are ill with "summer complaint" from dirty water and milk and flies and fried food. We nurse them; we go endlessly to sponge them and give high saline. Now, many homes are screened, also the cribs; and wells are chlorinated; and potatoes and eggs are baked and boiled.

EDUCATION THROUGH THE CHILD

The Sadhu Sundar Singh tells how in the Himalayas he met a man trying to drive a cow and calf over the river, but they would not be driven. Then he tried coaxing with hay, but to no purpose. The Sadhu said to him: "Take up the calf in your arms and carry it and the mother will follow"—which was done. When we have restored a baby, we hold its mother forever after in the hollow of our hands.

The object of what we are doing is to get light. In Kentucky we have a race horse named "Fair Play." That is the spirit which we invoke in those who differ from us as to methods, and we ask them to remember, as William James reminds us, that it is by our fruits we are to be judged, and not by our roots.

Here we all are, we puny human beings "with our weak endeavors after good" rushing through space together on this one little planet, each of us with a wish to help a bit in our generation, as we can. We have in common all the things that are bigger than ourselves. The largest telescopes through photographic plates, after several hours exposure, take an impression of distances beyond any eye can reach. It is estimated that the farthest nebula in the heavens which may be photographed is so distant that the light has taken a hundred and forty million years to reach us. We of the Kentucky Committee have hitched our wagons on these stars, believing that "whatever doth make manifest is light."

Bibliographical Essay

Within the last fifteen years, there has been an upsurge of interest in the history of women and health. A very good introduction to this new field of historical scholarship is Judith Walzer Leavitt, ed., *Women and Health in America* (Madison: University of Wisconsin Press, 1984).

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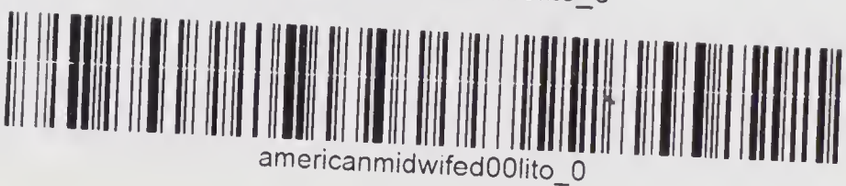
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